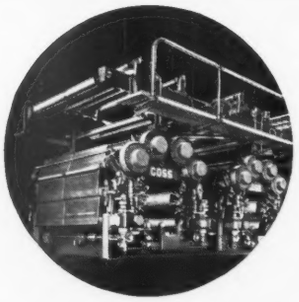


"producing with the greatest satisfaction"

H. W. COOPER, GENERAL SUPERINTENDENT OF THE WINNIPEG FREE PRESS, PRAISES NEW GOSS HIGH SPEED HEAVY DUTY PRESS

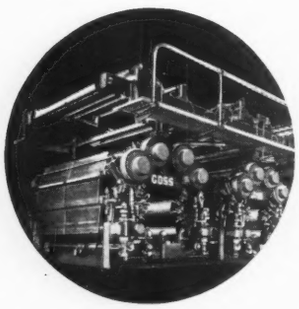
The Winnipeg Free Press, leading newspaper of Canada's Prairie Provinces and recognized internationally for the accuracy of its famous crop reports and the excellency of its editorial content, has been printed on a Goss High Speed Heavy Duty Press for the past year. The installation comprises ten units and two pairs of folders. According to a report submitted to Mr. E. H. Macklin, General Manager, by Mr. H. W. Cooper, General Superintendent, it has been "producing with the greatest satisfaction our Daily and Weekly circulations."

● FASTEST IN CANADA. "It is the fastest press in Canada, each folder running up to 52,000 per hour, making a total of 104,000 papers per hour from the two folders, and this speed has been achieved on more than one occasion . . . It has a guaranteed maximum speed in excess of our needs on our Daily of some 63,000 copies, but it is comforting to have in our Press Room a smooth running machine capable of producing our Weekly edition of some 165,000 copies in less than four hours.

● NO VIBRATION. "This press is of the balcony type and is installed in our Press Room, the steel structure going down to the other floor (sub-basement), to the actual foundation. Although it is of the balcony type and erected on top of steel structure, it has developed not the slightest vibration whatever."

● LATER DEADLINE. The absence of vibration which Mr. Cooper mentions arises in part from the sturdy construction of the press, the precision that goes into its manufacture, its correct design, and the use of spiral and helical gears. This High Speed Heavy Duty Press is equipped with two patented Goss features to assure a quick start. They are the Goss Plate Lock and the Goss Throw-Off. Upon the installation of the press a year ago it provided a stretch of twenty minutes in the deadline for the afternoon editions of the Free Press.

● PERFORMANCE PROVES ITS WORTH. For a half-century The Goss Printing Press Company has been building better and faster presses. Today the Goss High Speed Heavy Duty Press not only excels all its predecessors but is accepted as the world's leading high speed press. It is not what we think or say that establishes the high reputation of Goss Presses, but what publishers, pressmen and others know from their own experience with them.



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GOSS

J. M. LETHAM

SAVES *Time* IN *Proofreading* AND *Office Corrections*

THE SAVING OF TIME is only one of the advantages of the Ludlow system of display composition which J. M. Letham has experienced as superintendent of the Montreal Daily Star. Mr. Letham writes:

ON our three publications we set practically all advertising display lines and 75% of editorial heads on the Ludlow. Among the special advantages which I see in the Ludlow system are:

1. Never have to send a page back to stereotyper for "down" letters.

2. No trouble with broken letters or imperfect faces. It has enhanced the appearance of our publications.

3. By use of offset sticks, it is amazingly easy to use different sizes of matrices and still maintain perfect alignment. You can set display prices, such as large dollar figures with smaller figures for the cents, in one operation, thus avoiding the old bugbear of building up irregular sizes of type—now a thing of the past.

4. As the matrix cabinets occupy very little space, a great economy of space is effected, compared with the old style cabinets of type.

5. As the matrices are plainly marked as regards series and sizes, there is little or no excuse for dirty proofs. This expedites proofreading and saves time in correcting unnecessary errors. A careful printer of average ability and intelligence should be able to produce almost errorless proofs.

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Set in Ludlow Tempo Light Italic, Tempo Heavy, and Tempo Medium.

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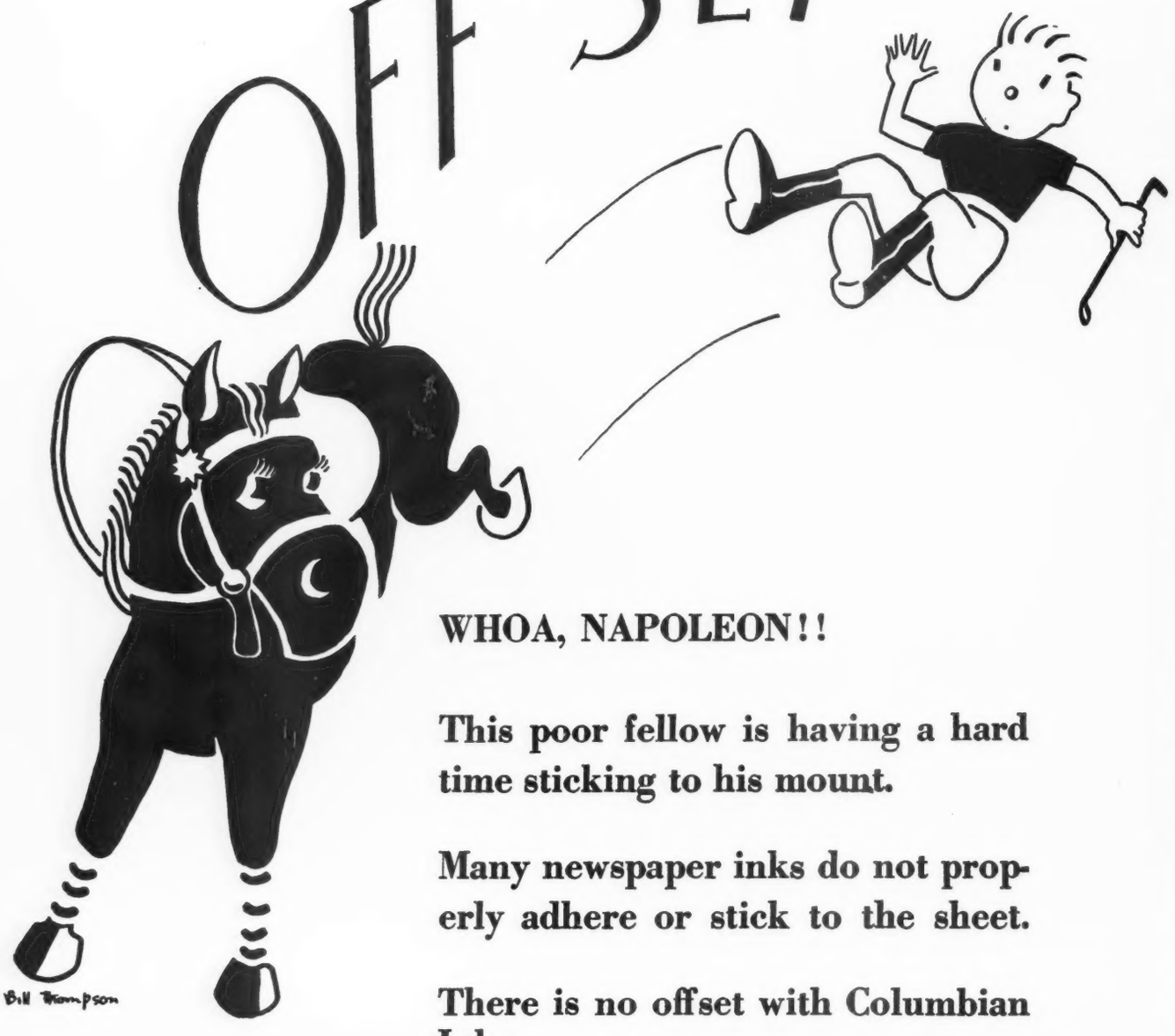

WHOA, NAPOLEON!!

This poor fellow is having a hard time sticking to his mount.

Many newspaper inks do not properly adhere or stick to the sheet.

There is no offset with Columbian Inks.

COLUMBIAN INKS

That's one reason why so many newspapers are now adopting them.

THE L. MARTIN COMPANY

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Arthur S. Thompson, Manager

PRINTING EQUIPMENT ENGINEER

TRADE MARK REGISTERED U. S. PATENT OFFICE. ESTABLISHED 1910

VOLUME 45
NOVEMBER, 1932
NUMBER 2

W. D. WILL, Publisher MAC SINCLAIR, Editor

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Let others also read *The Engineer*

After you have read this copy, pass this magazine along to the other men in your organization. They will undoubtedly get helpful ideas from its pages.

Check in left column after reading. Note articles of interest.

☐ ---------- *Composing Room Superintendent*

☐ ---------- *Superintendent Press Room*

☐ ---------- *Chief Composing Room Machinist*

☐ ---------- *Superintendent Stereotype Foundry*

☐ ---------- *Monotype Department*

☐ ---------- *Photo Engraving Department*

☐ ---------- *Superintendent Electrotype Department*

☐ ---------- *Foreman Lithographing Department*

☐ ---------- *Bindery Foreman*

☐ ---------- *Production Manager*

☐ ---------- *Mechanical Superintendent*

☐ ---------- *Manager*

☐ ---------- *Purchasing Agent*

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No. 4 of a Series of Advertisements pointing the way to Lower Composing Room Costs

An Operator cannot set LIVE *Composition and Correct Proofs* ....AT THE SAME TIME!

The same holds true with floor men in ad room. If corrections are heavy at edition time . . . and if *all* composition is corrected before the edition goes in—*live copy must wait!*

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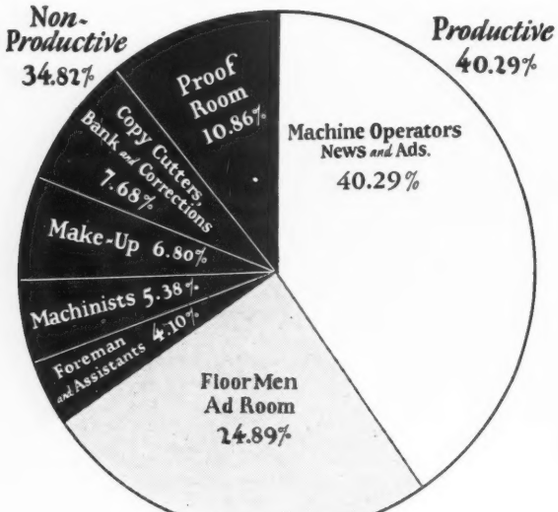

Chart made up from distribution of newspaper forces representing 10% of membership of International Typographical Union in the United States

So errors DO create a great loss of time and money!

It is a known and provable fact that the average paper must reset 6 lines of every 100 on account of errors in original composition. And the Black & White Contrast Matrix *guarantees* to reduce *all* original errors at least 25%.

Is not this saving worthwhile? Write for further information concerning Black & White.

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Contrast Matrix
"Contrast Provides VISIBILITY"

MATRIX CONTRAST CORPORATION, 4005 Empire State Bldg., New York

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PRINTING
EQUIPMENT
ENGINEER
November, 1932

A Painless Process of Saving Time

By Dr. Willis R. Whitney*

It begins to look as though the photo-electric tube, whose "modus operandi" was discovered about forty years ago, is becoming capable of doing things much better than the very ancient human eye which it so much resembles.

It is probable, too, that its electric action, or the electric "kick" given by this sensitive metallic "retina" of the vacuum tube, is like the electric reaction our eyes give our brains, and that the wires in this newer apparatus take the place of the optic nerves.

The photo tube (popularly known as the "electric eye") has great advantages in the meaner services of seeing. We need to sleep and we repeatedly wink, and thus miss something. But the photo tube neither sleeps nor winks. Moreover, it may be made much more accurate and sensitive than the eye of man. It is used with telescopic observations, where it must keep uninterrupted watch for hours at a stretch. In the factory it must measure the light of the manufactured electric lamps more satisfactorily than can human operators. And it measures light too feeble to be visible to us. Moreover, it "sees" in ranges or what we call "color" entirely outside our human range. It sees ultra-violet, infra-red, and x-rays. It is relatively a new tool, and we may expect great improvements upon it and many applications of it.

It is a token of our much maligned machine age. Its use is a painless process of saving time. Other experiments are necessary to learn how to use the time saved. At all times there are all kinds of people, and they are always changing, enjoying, and complaining, and are properly unsatisfied, if not actually dissatisfied. It seems never sufficient that each mind should experience more or less completely the changes which another one has experienced, even if done gently by the theatre. Some of us must forever strive to devise entirely new things and new powers. This is necessary to let the human mind unfold. Otherwise some more fitting form of life, perhaps insects or their equivalents, may develop upon the earth to take our places.

New machinery and novel gadgets give man his mental opportunities. If devices can later be discovered to think constructively for him, he may then proceed happily with the exclusive cultivation and use of his imaginative, artistic, or poetic ganglia. These have been kept submerged during the ages by the crying need for food.

Photo tubes are in general not more sensible, but they are more sensitive, than their antecedents. When the imaginative astronomer focuses his powerful telescope, with its recording photo tube, upon some remote star to learn its inconceivable temperature, or to determine how it really twinkles, he expands our whole universe and makes us think new thoughts. Certain new thinking may best be continued by that astronomer, because of his advanced position, but we are still carried forward as a race by the changing universe.

Not long ago the steel treater, who makes, among other things, the structures of the telescopes, carried in his eyes the power or art of controlling the quality of steel. By this skill he exactly controlled the temperatures of his furnaces. He compensated for the apparent changes of fire-brightness between night and day and between cloudy and bright days, and his skill was essential. Along this line his eye and brain were highly developed and forced to grow. But all eyes are not alike, they cannot be standardized and calibrated. They fatigue and lose their cunning, and this eye power must be taught to the young men by the old.

A photo tube can be standardized and calibrated. It can fix its attention exclusively upon one spot in a glowing furnace just as well as upon some distant star. It will not grow tired. It will not wink. And so the brain of the furnace men and that of the astronomer are freed from mere routine, yet exacting, effort and enabled to engage in a new kind of growth.

It is not often that the furnace man may be expected to expand his mind in poetry or art upon being relieved of his customary work. It is the changing race which realizes the new privilege. This is done in a way which does not demand any reversion of type nor equivalent effort in scratching more soil for food.

In brief, new machines actually free man's time and effort. A large part of the energy thus conserved may be spent in automobiles or at golf, in new or old pleasures, but a part will probably always be re-invested in more results like the samples. And that is what experiments are for.

*Director of Research Laboratory, General Electric Company, Schenectady, New York.

Distinguishing Obsolete from Used Equipment

By H. A. PORTER*

Mr. Porter Points Out the Responsibilities of the Mechanical Executive in the Matter of Helping His Employer Replace Obsolescent Machinery.

WHEN the Editor of PRINTING EQUIPMENT ENGINEER invited me to discuss the subject of equipment obsolescence as it affects mechanical executives of the printing industry, I accepted with the realization that I would have the one group most appreciative of the subject under consideration. You men who are mechanical executives in the printing industry — superintendents, foremen, department heads—know from first-hand experience the actual extent of equipment obsolescence in your own plants. You are in preferential position to observe the maintenance and production costs which indicate these conditions.

Time studies of the various presses, shut-downs, speed and production records are at your command. I have noticed, as you have, that the shop which has a preponderance of obsolete equipment is fighting an uphill and necessarily a losing battle, notwithstanding your efforts to meet the demands made upon such equipment.

The extent of obsolescence of printing machinery throughout the industry is often not realized by the executive management. Men in the shop hesitate to call it to their attention, yet surveys reveal its presence where oftentimes it is least expected by other than the mechanical force. Difficulties directly attributable to faulty equipment are charged frequently to other causes, thus forcing the press crew to work under a tremendous handicap. Clear thinking shows the need for discarding these slow and inefficient presses and replacing them with high-speed production units.

Plant modernization for profit is a fact with which you are familiar. It is not merely a theory to you who

*Vice President in Charge of Sales, Harris-Seybold-Potter Company, Cleveland, Ohio.

That Electric Eye

[AN EDITORIAL]

THE full electronic newspaper may be an actuality by 1942, says Orestes H. Caldwell, editor of *Electronics*. Mr. Caldwell, in opening a symposium in the Engineers' Auditorium under the auspices of the New York Electrical Society on October 19, stated that the Electric Eye is being utilized now in modern print shops to count press runs, insure accurate register and trim the edges of printed copies.

No less than fourteen applications of the Electric Eye to various operations in the industry were cited, as follows:

1. Automatic machine setting of type from typewritten copy.
2. Halftones made by photo-electric scanning without acids.
3. Automatic control of accurate register on web presses.
4. Automatic control of accurate trimming.
5. Automatic stops for presses, in case of paper breaks.
6. Counting logs in paper mills, sheets and forms in binderies.
7. Matching colors of inks and papers.
8. Measuring glare and opacity of paper.
9. Detecting and connecting press vibrations.
10. Safety-first devices around presses, rolls, etc.
11. Automatic door-openers and stripping aids.
12. Circulation analyzers.
13. Office conveniences.
14. Automatic mailing sorters.

Mr. Caldwell's prophecy, in the light of present realism, should be made the concern of every mechanical executive, inasmuch as a number of the functions of the Electric Eye will alter production methods largely by dispensing with the human factor.

In certain applications, elimination of the human element in industry is involved; other applications are an aid to the human element, while still others may be utilized to lift the burden of drudgery from the shoulders of the worker. As Dr. Whitney has it: " . . . the photo tube neither sleeps nor winks." In the case of the detector of a break in the web of a newspaper press it is naturally superior to any one of the several human senses which might be employed to detect an interruption of paper flow through the press.

Some of the applications are of immediate success—others will require long and patient research work looking toward refinement and flexibility on account of the peculiar complexities of their functions.

Having witnessed demonstrations of electrical and mechanical devices which perform in seemingly miraculous fashion, one is led to wonder if man's ingenuity couldn't be employed also to find a way of absorbing gradually into other utilitarian endeavors the craftsmen who will be displaced. We do not believe science has a corner on knowledge which, while it may be used to displace human functions, may not be employed as well to relieve the discomfort of human beings caused by the introduction of magic mechanisms.

are charged with responsibility for maintaining production—for minimum costs—for being ready to compete profitably in all competitive situations. Modernization of press equipment is a very vital thing to you.

My acquaintances in mechanical divisions have talked to me with utmost frankness. I have realized that obsolescence of equipment is a very personal thing to them. These men have expressed the wish that, for the good of their concerns, many presses on their floor ten, fifteen and twenty years old—depreciated presses—might be replaced by new and modern machines marketed during the depression years.

A RESPONSIBILITY OF THE PLANT EXECUTIVE

The mechanical executive contributes immeasurably to the well being of the plant and its personnel when he takes a strong position with reference to machinery that is consuming plant profits and destroying the livelihood of himself, his associates, and the owners of the business.

They realize that with the bettering of business profitable operation of plants for which they are responsible will, with the increase in business, prove a hazardous undertaking unless percentage of installations of modern equipment is higher in the plants for the mechanical operation of which they are held accountable.

To you the statement that obsolete equipment has no intrinsic value in competitive production needs no explanation. One does not need to argue the oft repeated charge that the printing industry is over-equipped. Plant mechanical executives understand this to be an over-equipment of the obsolete. The obsolete press is a menace whether on the floor of the original purchaser or in other hands.

It is the responsibility of the mechanical man to present to his management the truth on equipment conditions. It is time for a house-cleaning in pressroom equipment—for an actual junking of these presses in the individual plants and in this elimination you have both responsibility and opportunity. Until the facts are clearly presented to management you share responsibility for continuing obsolescence. What a diversity of methods are available to you for making cost

Continued on page 18

The Right and the Wrong Side of Paper

By W. W. HITCHNER*

COVER paper in most cases, like blotting paper of the better grades, shows quite plainly the difference between the felt and wire sides, especially in the heavy weights. Before printing cover papers, if the job is to be of a high grade of workmanship and requires printing on both sides, have your customer understand the importance of printing on the proper side, and make separate runs of each side. Do not make a work-and-turn form, as this will give one-half printed on the right and one-half on the wrong side. The former procedure will be profitable to you in two ways: First, by giving you an extra run, and second, by keeping you in the rank of the master printers. If it is to be a cover for a book, of course, the felt side should be the outside. If it is to be a folder or a mailing piece, the outside when folded, should be the felt side. In duo covers, that is, covers with one side mottled or carrying a design, the opposite or wire side is generally white or of a solid color.

When using watermarked papers, such as ledgers, flats, bonds, linens, and so on, the printing should be on the felt side, so that when held up to the light the watermark can be read in the same position as the printing thereon without reversing or flopping the sheet. It is improper to print on paper with the watermark upside down.

If the paper to be used is to go into books or for folders or something similar, the watermark should be in such position that when reading page one before the light the watermark is in correct position. This applies to watermarked book papers as well as to ledgers, flats and bonds that are used for making blank books or bound forms. Book papers, when used with the watermark in the right position, generally have the grain in the proper direction for correct folding.

Sometimes the size to be cut does not permit cutting the papers so the watermark will run horizontally. In this case the watermark should run vertically and in such position as to be read from the right-hand side of the sheet, all other rules as above to govern.

MANY THANKS, MR. LINK

Printing Equipment Engineer,
Cleveland, Ohio.

Gentlemen: I would be ungrateful if I did not tell you how much I enjoy reading PRINTING EQUIPMENT ENGINEER. There are so many interesting and instructive features in it that we look forward each month to receiving it and it is always passed around to the different department heads. I want to assure you that we will digest it from cover to cover each month.

Very truly yours,
LEON A. LINK,
Supt. Composing Room,
"Register and Tribune."

*Superintendent of Pressroom Production, The Robt. O. Law Co., Chicago, Ill.

Straight-Line Theory of Plant Layout

By S. P. WESTON*

Mr. Weston Discusses Planning of Newspaper, Publishing and Printing Plants. Everything Must Be Subordinated to the Time Element.

THE theory of the straight-line and gravity drop plant layout and building design, as applied to newspaper, publishing and printing plants, is predicated upon the one main controlling element of this industrial operation—*time*.

By using the time element as a base of measurement, the problems of building location, building design and mechanical layout, can be determined with mathematical precision to meet the production demands of the particular newspaper, publishing or printing concern involved. It is necessary to keep clearly in mind that time is the essence and controlling factor of a printing and publishing operation. In no other industry does the time element so definitely affect efficiency and cost of operation. The dominance of the time element prevails in every segment of the production operation and the orderly procedure is to weigh each element so that maximum production will be secured in a minimum time.

Assuming that we are considering the erection of a typical newspaper building, the first point for consideration is obviously that of location. A location should be selected where the incoming raw material can be received at least cost and the outgoing product distributed in a minimum time over a maximum area and at minimum cost. Strangely enough, more often than otherwise, such a location is found adjacent to or immediately in the vicinity of railroad trackage.

These elements of location having been satisfactorily coordinated, next comes the dimensions of the ground area. The actual dimensions of the building, not only have a bearing on the straight-line and gravity drop layout, but also on the general working conditions in the plant. As a rule, the ideal location and lot dimensions can be secured in a section where realty values are low and the capital overhead of the property is held to a minimum. The extent of the publishing operation and the output demand which is to be fulfilled will, of course, regulate the general floor idea and the dimensions of the building. There are certain general dimensions that lend themselves most usefully to average newspaper buildings. For instance, the general dimensions, 80 or 90 ft. by 120 to 150 ft., are workable for daily newspapers with circulations of from 100,000 to 250,000 daily.

These dimension will permit allocation of sufficient space to the mechanical units (aside from press room), and the editorial and news departments so that they may be laid out on a single floor in sequence so the flow of copy into the mechanical motion for conversion into the physical elements may proceed in a straight line with the supplementary elements flowing in the direction of the floor movement. At the termination or finish of the composing room operation, the product of the mat-moulding or stereotyping departments may be dropped in a direct line to either the foundry or press room. From the press room, the paper delivery goes to and through the mailing room to the delivery wagons. At no place is it necessary to reverse the movement.

In setting the machines and equipment in the mechanical departments, the time movement theory, if properly applied, automatically locates the machinery and equipment in the most advantageous position.

After the general scheme of the building and the departmental details have been determined, the equally important supplementary elements of lighting, ventillation and the refinements which contribue to the efficiency and well-being of the working personnel are taken into consideration. These also are measureable by the time element and are practical, valuable additions rather than fads or fancies.

Before utilizing the time theory and developing the straight line and gravity drop methods in the actual design of a building, we worked out the theory on careful engineering lines based on the premise that a properly designed newspaper building and plant layout would insure a saving of a minimum of ten minutes on the lockup of the last form on an average daily newspaper as compared with average newspaper plants of the country in 1920. The first newspaper building to follow this design was that erected by the New York *Herald-Tribune* in 1921. In working out the straight-line and gravity drop theory for the *Herald-Tribune*, we were confronted with certain limitations in the ground area. However, these were overcome by superimposing departments where it was not possible to locate them on a single floor.

The allocation of floor space in the *Herald-Tribune* building is: Basement: Paper storage; Street Level:

*Printing Engineer, New York, N. Y.

Mailing rooms, general entrance and lobby, small counter office; Second Floor: Reel room; Third Floor: Presses and stereotyping foundry; Fourth Floor: Composing room, mat-moulding; Fifth Floor: Editorial room; Sixth Floor: Advertising and business departments; Seventh Floor: Features and supplementary departments.

Floor layouts are such that at the termination of each floor function, the product drops in a direct line to the starting point in the next production motion. Mathematically this design, as first prepared, indicated a time saving of seven minutes. In actual practice, the saving was approximately eight minutes.

Unit operating costs were materially reduced. When the *Herald-Tribune* built an addition to their building in 1930, it was practically an expansion of the original general plant design.

A proper application of the time theory to either a newspaper or commercial printing plant cannot fail to result in greater efficiency and an increase in output. There is not the slightest mystery about basing a plant layout and general building design on this theory. It is simply the application of common sense plus patience and reasonably accuracy in mathematical computation.

Since the first design was supplied to the *Herald-Tribune* in 1920, the straight-line theory of newspaper building design and plant layout has become an accepted practice for this type of building in this country.

Dry Mat Manipulation

By Dry Mat Bill

"BUCKLES"

"The mat buckles." How many times have you used that expression to describe a distortion trouble?

What do you call to mind when some one tells you that "a mat buckles?" Do you immediately have a comprehensive idea of just what trouble has been experienced? No, of course you do not.

Don't you think it an acceptable suggestion that all craftsmen cease to use the word "buckle" and in its place be specific by naming the particular type of distortion?

The principal types of distortion are excess stretch, wrinkles, waves, and concavity. These may be caused by uneven conditioning of the mat, faulty make-up in the chase, faulty chases, wrong types or combinations of cushion, defective moulding machine, a poor scorcher, pinching and binding in the casting box and many other causes.

Distortions are seldom, if ever, the fault of the mat. The trouble nearly always can be traced to faulty equipment or manipulation. After the reason has been found you will not have much difficulty in overcoming the trouble.

I will outline some of the causes of distortion and make a few suggestions.

UNEVEN CONDITION OF MAT

Mats may now be secured from the manufacturer conditioned with just the amount of moisture that will give the shrinkage required. They are, as a rule, sent to you in far better moisture condition than you could possibly obtain yourself with the facilities found in the average plant. However, there are times when there appear to be hard spots in the mat. This is a pretty sure sign of uneven condition and is not a fault of the construction of the mat as many seem to think.

If the mats arrive this way from the mill, they are green and have not been moistened long enough to have become thoroughly seasoned and plastic. This possibility is rare but if it does happen, place them in a storage box and put them away for a few weeks.

This condition signifies poor storage facilities or carelessness. Unless mats are properly stored, the chances are that they will lose moisture unevenly over the area of the mat. Now, when moulded and scorched, the part of the mat which is the driest will pull down, due to uneven shrinkage, and distort the printing surface beyond remedy.

When good storage facilities are lacking, it is suggested that the mats be left in the wrappers furnished by the mill, cutting a convenient slot in one of the bundle to permit removal of the mats as required. A damp sponge or cloth may be rubbed along the edges of the mats to good advantage but care must be taken that no moisture runs in between them.

FAULTY CHASES

Faulty chases commonly cause distortion. Many have margin grooves that are too wide or too deep, warped foot and side sticks which will cause extreme pressure variations resulting in distortion of the mould. The chase should be exactly type high or 0.918 in. for the protection of the type matter. Higher chases will, of course, reduce the pressure and aggravate stretch. In some cases, frames have been found which are slightly lower than type high. This helps to eliminate stretch but does so at the expense of the type matter or printing surfaces of the form. Low chases also tend to cause trouble in the casting box.

FAULTY MAKE-UP

Carelessness in making up the form is often another cause of distortion. Forms locked too tight or too loose, low borders and illustrations, high cuts, etc., will make uneven printing surfaces for the mould. All these faults should be avoided. No tolerance should be permitted below 0.918 in. The amount of space around an illustration will govern the tolerance above 0.918. In any case 0.006 in. should be sufficient.

When added pressure is desired, it is best to use a hard paper overlay placed on top of the mat. No difficulty will be experienced in placing the overlay accurately if you will chalk-mark the top and side of the chase indicating the exact

position of the illustration and then align the overlay on top of the mat with these marks. The overlay must not run over the column rule. The best plan is to allow the overlay to be about ½ in. smaller than the cut to permit vignetting the edges.

Many operators rub a soiled hand rag over the mould before removing it from the form to accentuate the uneven surfaces. Satisfaction may be secured by scoring the back of the mould, say about half way through, and rubbing down the uneven surfaces as much as possible before drying.

The common reason for lost borders is that they are not fully type high. Several moulds under moulding machine pressure will lower them.

High illustrations often tend to rob the adjoining printing surface of sufficient pressure. This causes uneven printing areas in the mould and, of course, the same defects are passed on to the stereotype plate.

STRETCHING OF THE MOULD

Some stretching of the mould is always experienced when dry mats are passed under the roller. It cannot be avoided. A dry mat of proper construction and condition will stand for a reasonable amount of stretch and will shrink again to the desired width without causing any particular trouble if properly handled. Trouble begins through excess stretching and the mat cannot be made to come back evenly and at the same time properly preserve the printing surface.

When excess stretching is noted, it may be reduced by the use of a thin creeper blanket of rubber or composition.

The creeper blanket is used successfully by a majority of the newspaper plants in this country. However, of some twenty-odd creepers on the market today only a few will accomplish the desired results without sacrificing the printing appearance.

The proper creeper reduces pressure, provides sufficient resiliency to obtain the depth of the type bowl when used with a firm cork and felt or moulding board top. Care must be exercised to see that the creeper is thin and that the combination used is not too soft. The use of a rubber press blanket or similar material next to the mat is satisfactory when the top cushion is not too hard.

When such firm resiliencies are used as the rubber press blanket, a cork is recommended for the top blanket. If additional thickness is desired, a felt may be inserted between.

Regardless of the type of moulding cushion which is used, all that matters is that the small point lower case type bowls must be of sufficient depth to print clean and sharp, the fibres of the mat closed up or the pores sealed, so as to make a smooth printing surface in the casts and the amount of stretch should be limited sufficiently so as to permit its being crowded back into place in positioning.

CONCAVITY OF THE MOULD

Concavity of the mould is caused by disruption of the space depth. Just so much of the mould is printing area and so much blank space area. When these are altered you can expect concavity.

When low quads are used for fillers, it is advisable to fill the spaces in with slugs, particularly alongside of borders and printing matter to keep the amount of space depth within ordinary manipulating convenience.

Spaces, due to their curved shape, do not turn as readily as the printing surfaces, particularly long and narrow spaces. When the regular dry mat forming machine is not available to force back the surfaces which have been disrupted by the shallowing of the space depth in curving the mould, it may be necessary to rub them back into place with a small roller or wooden furniture caster. This is especially true where the moulds are positioned in the tubular shape. When a sta-

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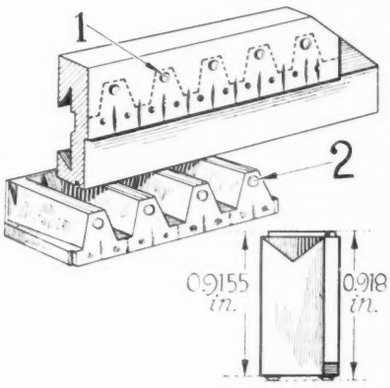
Improving Printing Qualities of Display Slugs

RECENTLY, molds have been applied to head-letter line-casting machines in several newspaper plants which measure 0.878 in. across the mold body, cap and liners, instead of the usual 0.875 in. The slug is trimmed in the customary manner, but measures 0.921 in. high instead of the standard 0.918 in. These extra high molds, it is understood, may be used in conjunction with the regular molds casting type-high slugs. The 0.003 in. has been added to the front surface of the mold. Improved appearance of the headings as printed in the paper are claimed by the users, since the grayish effect which sometimes appears on the lower letter extremities has been eliminated. The extra 0.003 in. height enables the stereotyper to obtain better results after several mouldings of the same heads for various editions.

Much can be done to improve the moulding qualities of slugs cast in the standard 0.875 in. mold with reference to withstanding the pressure exerted by the dry mat roller.



Sometimes the lower portion of a head-letter or display slug cast on a 30 or 36-pt. body may print with a grayish cast in the paper, especially where the same slugs are passed through the matrix-rolling machine for several editions.

The method consists of casting "buttons" approximately ⅛ in. diam. at the base of the lower portion of each slug rib as shown at *2* in the drawing to provide a footing equivalent to that cast on the upper portion of the slug base. As is shown in the diagram, a slug which trims 0.918 in. on the jet-sprue side may not measure within 0.002 in. or 0.003 in. from the face to the rib side of the base because of the shrinkage which takes place when the metal solidifies in the mold. Consequently, there is no metal for the base knife to trim on the rib portion of the slug base.

A section of Intertype crucible mouthpiece is shown in the drawing, and at *1* is indicated one of several shallow depressions approximately 0.030 in. deep which have been drilled centrally (⅛ in. twist drill) in the center of that portion of the mouthpiece which locks between the mold cap ribs. When the mold containing the slug passes the base knife the buttons are trimmed just like the jet projections and vent sprues.

Display slugs are cast with a much better printing surface when the plunger is caused to make an abrupt casting stroke. Occasionally, renew the shoe which is located at the front part of the dip in the pot pump cam. In time, the end of the shoe becomes rounded from use and will then soften the sharp initial downward movement of the plunger. Also see that the pressure relief hole in the bottom of the plunger is properly adjusted as to size so the plunger will have completed its full downstroke when the rising surface of the dip in the cam returns the plunger to normal position.

How Mechanical Executive Can Help His Chief in Plant Management

By DOUGLAS C. MCMURTRIE*

Mr. McMurtrie Discusses What Can Be Done in the Composing Room to Improve Advertising Typography—Centralization of Advertising Copy Layout is Desirable.

It is of vital importance to the publisher that the sales message of the advertiser shall be transmitted to prospective purchasers of his products or service. The only ways the message can be passed on is through the medium of type, and typography thus comes to have for all of us more than an academic interest. If the sales message has any merit whatever, it will bring results only if presented typographically in legible and easily comprehensible form.

The typography of advertising is, therefore, of much more importance to the newspaper publisher than is generally realized.

The advertising departments of a number of department stores in one of our largest cities have for years paid independent composing rooms to set their advertising, rather than send it to the newspapers to be set free.

One store, of moderate size, with the typography of which I have had personal experience, used to spend about $1000 a week to have set in type, with taste and care, its advertising copy, the cost of setting which was already figured into the price they were paying for space. Other stores in this city at the same time were paying more than this and many were paying lesser amounts.

The store in question believed it got better net results by deducting $50,000 a year from its appropriation for newspaper space and spending it for typesetting. Of course, this meant that the newspapers were losing just that amount which would otherwise have been invested in linage.

Similar situations, on a lesser scale, have prevailed in other cities. The present economy wave has led many advertisers to go back to typesetting by newspaper composing rooms, but some of these are looking forward to the time when they can again afford to have their typography set the way they want it.

Whatever we may think of the practice, it is clear that many experienced advertising managers have been convinced that good typography justifies in the results from advertising the added expense thus involved.

*Director of Typography, Ludlow Typograph Company. Abstract of Address at Journalism Week at the University of Missouri.

Of course, the national advertisers settled this point years ago, and all important advertising in both newspapers and magazines is now supplied to publishers in the form of electrotypes or stereotype matrices.

It is a mystery to me why many newspaper publishers have been willing to sit by complacently and see these large amounts of money diverted from space appropriations, the benefits of which should accrue to them. At any rate, the situation has not aroused them to the point of offering to their advertisers typographic facilities approximately equal to those available in outside composing rooms.

FAULTY BASIS OF COMPOSING ROOM SET-UP

On the side of the newspaper, it must be admitted that composing rooms have not been set up to deliver the most effective tyopgraphy. Publishers have not been willing to give composing room executives the facilities they need, failing to sense the financial importance of effective advertising typography. And under time pressure exerted by advertisers, production has been established on a basis of speed rather than intelligent plan.

Composing room executives can serve their publishers' interests by threshing out this situation and working out a plan to give advertisers the benefit of the most effective typography. Unless this is done, the results from much advertising space are discounted in advance.

Composing room executives will tell you the expense of setting type properly is not much greater than the cost of setting type improperly. On many large newspapers, local advertisements supplied in plate or proof form are set all over again the next day as bogus composition. So the newspaper publisher is standing the payroll cost as well as providing the equipment for the typesetting. The payroll, of course, is the main cost involved. The possible additional expense would be the added time (and, therefore, the added payroll) involved in setting type carefully rather than carelessly, and in providing up-to-date typeface equipment rather than an antiquated selection of typefaces in which to set his advertisers' copy.

The difference in cost between doing the typesetting well and poorly could not possibly exceed twenty per cent of the total involved. This would mean, in the instance already mentioned, that an added expenditure of $10,000 a year would release additional space appropriation of $50,000 a year. Most publishers would consider this a good investment, if they thought the matter through.

Please bear in mind that mention of the large metropolitan stores is only to prove that effective typography pays out in sales results. Of course, the vast majority of local advertisers throughout the country could not possibly afford such extra expense. They are, therefore, restricted to the typography they can obtain from local newspapers. If my thesis is correct, however, their sales results are falling short of what they might attain if better typesetting were the rule rather than the exception.

If I have convinced you that the typography of newspaper

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October Printing Patents

Printed copies of patents are furnished by the Patent Office at 10 cents each. These may be obtained by addressing the Commissioner of Patents, Washington, D. C.

1,876,378. LOCKING OF STEREOPLATES OR PRINTING SURFACES TO THE CYLINDERS OF ROTARY PRINTING MACHINES. Matthias Lewis Wilkinson and Robert Bradshaw, Preston, England. Filed Mar. 25, 1931, Serial No. 525,280, and in Great Britain Apr. 1, 1930. 6 Claims. (Cl. 101—378.)

5. Means for locking printing plates on a printing cylinder, comprising a cylinder having a central margin ring and a groove extending lengthwise from the end of the cylinder, inner and outer locking dogs slidably mounted in the groove of the cylinder and adapted to hold inner and outer printing plates between the dogs and the inner dog and the margin ring, an internally threaded sleeve carried by the outer dog, a second internal sleeve carried by the innder dog, a rod extending from the end of the cylinder and having threads upon its inner end engaging in the sleeve of the inner dog for moving the dog when the rod is turned, a threaded hollow rod around the first rod and freely movable thereon and engaged in threaded relation with the sleeve of the outer dog for moving the latter when the outer rod is turned, means for turning the outer rod to move the outer dog and release the outer plate, and means for simultaneously moving the inner and outer rods for simultaneously moving the inner and outer dogs to hold the outer plate in interlocked engagement on the cylinder and for freeing the inner plate therefrom.

6. Means for locking printing plates on a printing cylinder, comprising a cylinder body having a longitudinal groove therein and a central margin ring, a pair of locking dogs slidably mounted in the groove of the cylinder and adapted to engage inner and outer plates between the ring and the inner dog and between the inner and outer dogs, a threaded shaft in the groove extending from the end of the cylinder and threaded through the outer dog and slidably engaging through the innder dog, an abutment carried upon the inner end of the threaded shaft to engage the inner dog, means for turning the shaft to adjust the outer dog, and means for moving the shaft longitudinally in the groove for moving both the inner and outer dogs.

1,876,891. FORM ROLLER LIFTING DEVICE FOR KELLY PRINTING PRESSES. Abraham M. Finver and Charles Weber, New York, N. Y.; said Weber assignor to said Finver. Filed Dec. 30, 1929. Serial No. 417,371. 2 Claims. (Cl. 101—358.)

1. In a printing press a stationary slotted bar secured to the frame of the press, a movable bar parallel to the stationary bar, and in close proximity thereto, a pin on the movable bar adapted to travel in the slot of the stationary bar, a pivoted operating lever, an operating rod attached at one end to the pin and its opposite end to the operating lever, and a means for lifting and lowering the movable bar supporting the end spindles of the printing rollers.

1,877,359. PAPER FOLDING MACHINE. Louis H. Morin, New York, N. Y., assignor to West Disinfecting Company, a Corporation of New York. Filed Dec. 12, 1929. Serial No. 413,461. 18 Claims. (Cl. 270—79.)

1. A web folding machine comprising a yieldably mounted platen, gripper jaws pivoted on fixed pivots and overhanging opposite edges of the platen, means for directing web material toward the platen between the jaws, two folder blades on opposite sides of the web connected to reciprocate together each to and from a position underneath the jaw on the side of the web opposite to it, and means for raising and lowering the jaws in timed relation to the entrance and withdrawal of the blade coacting therewith.

1,878,184. PNEUMATIC WEB SEVERING DEVICE. Oscar Charles Roesen, Brooklyn, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Nov. 15, 1927, Serial No. 233,442. Renewed Dec. 10, 1931. 5 Claims. (Cl. 242-58.)

1. The combination with means for guiding a web and means for pasting a new web roll to it, of means for projecting compressed air against the expiring end of the old web at both edges and across the web in a straight line and constituting the sole means for severing the web.

1,878,231. TYPOGRAPHICAL COMPOSING AND DISTRIBUTING MACHINE. Harold A. Burt, St. Albans, and John H. Hilpman, Hollis, N. Y., assignors to Mergenthaler Linotype Company, a Corporation of New York. Filed Aug. 8, 1930. Serial No. 473,810. 20 Claims. (Cl. 199—46.)

1. In a typographical composing and distributing machine, the combination with a main frame designed to support a magazine unit for movement rearwardly and downwardly about an axis located at or near the center of the unit, of means for adapting the main frame to give support to a magazine unit movable upwardly about an axis located at or near the upper end of the magazine unit, the magazine unit comprising a base frame and a magazine mounted thereon and slidable off the same in a forward direction, as well as a pair of rotary cams journaled in the base frame at or near its lower end to effect the upward swinging thereof, and the means comprising a pivot rod mounted in the main frame for the upper end of the magazine base frame, and a pair of rollers also mounted in the main frame and with which the rotary cams on the base frame engage.

1,878,264. SUPPORTING MEANS FOR WEB-ROLLS. Leslie W. Claybourn, Milwaukee, Wis. Filed June 3, 1931. Serial No. 541,831. 10 Claims. (Cl. 242—72.)

1. In a supporting means of the character described, the combination of a supporting staff, a sleeve thereabout, a second sleeve about the staff rotatable with relation to the first-named sleeve, a radially expansible chuck about the axis of the staff, an endwise movable chuck expanding member about the axis of the staff, and means causing endwise movement between the endwise movable chuck expanding member and the second-named sleeve for radially expanding the chuck.

1,878,319. APPARATUS FOR PREVENTING OFFSETTING IN PRINTING MACHINES. Thomas F. Pinder, Merion, Pa. Filed May 30, 1930. Serial No. 457,609. 4 Claims. (Cl. 101—416.)

1. An apparatus for preventing offset of printing presses comprising means for subjecting freshly printed web of paper during its travel from one set of printing rolls to the other set of printing rolls to quick successive treatments of heat and cold, and means for subjecting the printed web of paper to ozone at a point between the heat and cold treatment.

1,878,347. PROCESS AND APPARATUS FOR PREPARING PRINTING ROLLERS. Alexander Tausz and Franz Stehlik, Budapest, Hungary. Filed Jan. 29, 1929, Serial No. 335,931, and in Hungary Dec. 12, 1928. 11 Claims. (Cl. 95—73.)

1. In the art of producing an etched printing roller having a continuous design formed upon its surface which comprises a continuous succession of design elements, those steps which consist in photographically printing the design elements successively upon aliquot parts of the circumferential dimension of the printing roller, the printing being accomplished in each stage by the same light transparent film, the film being provided with the design elements and being held in close contact with the light sensitive surface of the roller during each photographic printing operation, the relative portions of the roller and of the film being shifted after each printing operation in order to cause the film to contact with the next aliquot part of the roller, the relative shift being solely in a circumferential direction.

1,878,564. DOCTOR CLEANING DEVICE. John E. Woodbury, Worcester, Mass. Filed Mar. 27, 1931. Serial No. 525,824. 11 Claims. (Cl. 101—163.)

1. The combination with a doctor for removing the ink from a printing plate, of means of moving the doctor to a horizontal position and means relatively movable along the doctor horizontally on both sides thereof for cleaning the ink therefrom.

1,878,565. INTAGLIO PRINTING. John E. Woodbury, Worcester, Mass. Filed July 3, 1931. Serial No. 548,613. 12 Claims. (Cl. 101—163.)

1. The method of printing from an intaglio printing plate, which consists in inking the plate, wiping the surface of the plate by means of a doctor, removing excess ink only from certain parts of the area of the engraved portion of the printing surface, and thereafter cleaning the flat surface of the plate again.

1,878,745. FOLDING MACHINE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Original application filed Mar. 22, 1928, Serial No. 263,909. Divided and this application filed Oct. 2, 1930. Serial No. 485,911. 5 Claims. (Cl. 270—86.)

1. In a folding machine, the combination of a cylinder in position to engage the web and having an area near the end fluted, and a roll bearing only against the fluted area for forcing the longitudinal fold in the web against the fluted edges and flattening the fold.

1,878,895. METHOD OF ENGRAVING METALLIC SURFACES FOR PRINTING. Wilhelm O. P. Schutte, Brooklyn, N. Y. Filed Sept. 29, 1930. Serial No. 485,218. 7 Claims. (Cl. 41—43.)

1. A method of engraving by an etching process, a metallic surface for printing purposes, including the step of spraying an acid resisting substance onto the surface to vary the intensity of the sprayed resist for varying the depth of the acid bite to develop a shaded design.

1,878,904. PRINTING PRESS. Walter Harold Smith, Toronto, Ontario, Canada, assignor to Business Systems Limited, Toronto, Ontario, Canada, a Corporation of Canada. Filed May 28, 1930. Serial No. 456,760. 23 Claims. (Cl. 101—181.)

1. In a printing press of the type described, the combination with the impression cylinder, impression cylinder shaft and driving mechanism, of a clutch device for engaging or disengaging the impression cylinder shaft and drive, and means automatically actuated by the opening and closing of the clutch for moving the impression cylinder in and out of its printing position.

1,879,417. PROCESS FOR PRINTING INSCRIPTIONS AND DRAWINGS INTENDED TO BE PLACED UPON WOOD, FABRICS, AND OTHER ABSORBENT MATERIALS. Gaetano Muzzioli, Milan, Italy. Filed Apr. 12, 1929, Serial No. 354,701, and in Italy May 22, 1928. 3 Claims. (Cl. 41—33.)

1. The method of printing on absorbent materials which comprises coating a sheet with mucilage composed of dextrine of white maize, rice starch carbonate of sodium, colophony, albumen, flowers of sulphur, gum arabic and pale glycerine, printing a design or inscription onto the coated sheet with printer's ink or colors mixed with spirit of turpentine, beeswax, paraffine and powdered colophony, and offsetting the design or inscription from the sheet onto wood, fabric or other absorbent materials by pressure and heat.

1,879,591. WEB TENSIONING AND CONTROLLING MECHANISM FOR PRINTING MACHINES AND THE LIKE. Henry Taylor and William Gibson, Newcastle-on-Tyne, England, assignors to J. H. Holmes & Company Limited, Hebburn-on-Tyne, England, a Registered Company of Great Britain. Filed Aug. 29, 1931, Serial No. 560,180, and in Great Britain Oct. 22, 1930. 17 Claims. (Cl. 242—75.)

1. For use with a printing machine having a main driving motor the combination with a stop switch for the motor of web-tensioning and controlling mechanism comprising a braking apron attached at one end to a fixed point, a drum to which the other end of the apron is attached, a spindle for the drum, a spring for coupling the drum to the spindle, an electric motor operatively connected to the spindle, means for energizing the motor and means for rotating the drum independently of the spring coupling to increase the tension on the apron suddenly, such means comprising a pivoted catch lever acting directly on the drum, an operating solenoid therefor and means for energizing the solenoid controlled by the stop switch whereby the solenoid is energized to actuate the lever when the switch is operated to stop the main driving motor.

1,879,597. MULTICOLOR PRINTING PRESS. Oscar H. Banker, Philadelphia, Pa. Filed July 7, 1927. Serial No. 203,880. 5 Claims. (Cl. 101—186.)

1. In a multi-color printing press, a plurality of type beds, links, connecting the beds, racks on the type beds, means engaging the racks to cause the type beds to travel in a continuous path in a laterally extending plane, an impression form carried by each type bed and movable in a single horizontal plane, an impression cylinder beneath which the impression forms travel, means to impart to the impression cylinder the same number of revolutions as the number of type beds employed, and the same number of revolutions as the number of impressions which are to be made.

1,879,901. PAPER WEB TENSIONING MEANS FOR REEL-FED PRINTING PRESSES. Henry Vincent James, Cintra, England. Filed Aug. 25, 1930, Serial No. 477,772, and in Great Britain May 29, 1930. 10 Claims. (Cl. 242—75.)

1. In apparatus for the control of a rotary paper reel and the paper web therefrom which supplies a printing machine, a friction band which acts on the reel for restraining the rotation of the reel and tensioning the web, a tensioning roller for the band, and means for rotating the roller for tensioning the band to vary the effort of the band on the reel, the means comprising an epicyclic gear having three rotary elements, a coupling between one of the elements and the roller, an electro-dynamic machine, a coupling between the machine and another of the gear elements, and variable retarding means coupled to the remaining gear element.

1,879,902. PAPER WEB TENSIONING MEANS FOR REEL-FED PRINTING PRESSES. Henry Vincent James, Radlett, England. Filed July 27, 1931, Serial No. 553,398, and in Great Britain June 26, 1931. 4 Claims. (Cl. 242—75.)

1. In apparatus for the control of a rotary paper reel and the paper web therefrom which supplies a printing machine, a friction band making contact with the periphery of the reel for restraining the rotation of the reel and tensioning the web, a roller to which one end of the band is attached, an anchorage at the other end of the band and means for rotating the roller for tautening and slackening the belt and so varying the effort of the band on the reel, the means for rotating the roller comprising an epicyclic gear, a coupling between one element of the gear and the roller, a constant speed motor, a coupling between this motor and another element of the gear, a direct electric current generator coupled to a further element of the gear, the generator being driven continuously through the gear by the motor, and a variable ohmic regulator in circuit with the generator for adjustment of the energy generated and the turning effort or torque transmitted, through the gear, from the motor to the element coupled with the roller for imparting a rotary turning effort to the roller.

1,880,070. PRINTING. William E. Becker, Chicago, Ill., assignor to Goss Printing Press Company, a Corporation of Illinois. Filed Apr. 13, 1929. Serial No. 354,909. 7 Claims. (Cl. 91—16.)

6. In a rotary printing press the combination of a high speed rotary printing couple to perfect a web, a rotary tinting roller engaging the web and means for applying tinting material to the roller to be transferred thereby to the web.

1,880,119. TYPOGRAPHICAL COMPOSING AND DISTRIBUTING MACHINE. Harold A. Burt, St. Albans, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Oct. 1, 1930. Serial No. 485,592. 20 Claims. (Cl. 199—20.)

1. In a typographical composing machine, the combination of a plurality of matrix magazines, each provided with matrix releasing escapements and movably mounted so that any selected magazine may be brought into operative position, escapement actuating devices, and automatic means for increasing or diminishing the range of action of the escapement actuating devices according to the magazine selected.

1,880,160. SLUG CASTING MACHINE. Anthony J. Stouges, Queens Village, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Oct. 25, 1929. Serial No. 402,329. 17 Claims. (Cl. 199—52.)

1. In a typographical casting machine, the combination of a plurality of molds of different sizes and capable of independent selection, a transporter for presenting a composed line of matrices to the selected mold, adjustable means of determining the level at which the

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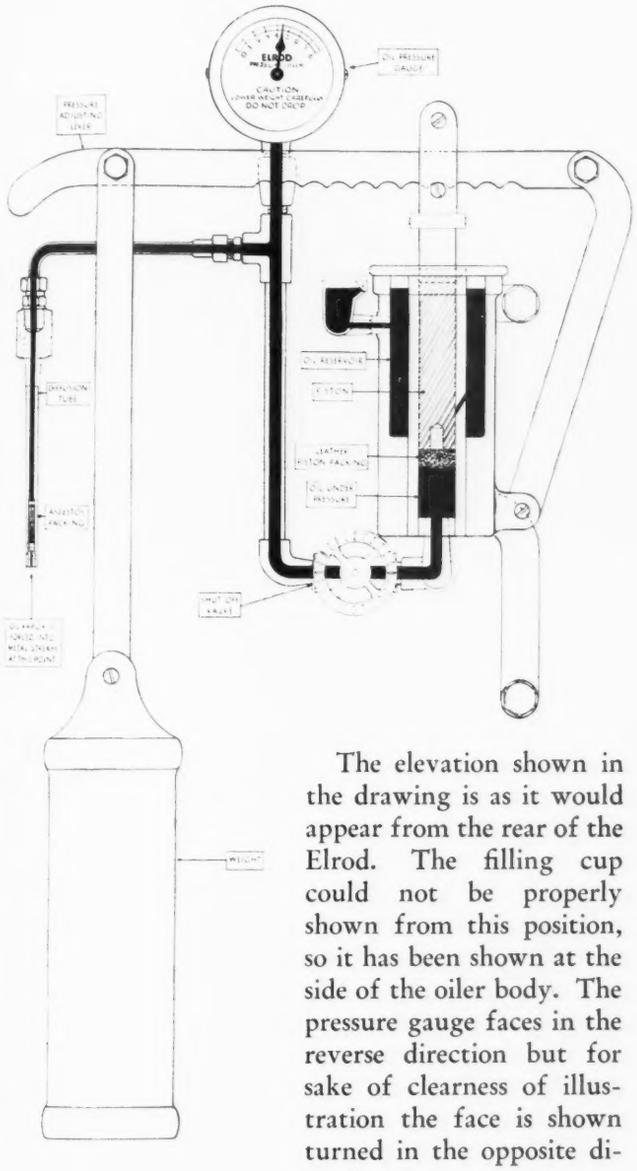
How Elrod Pressure Oiler Functions

By Douglas C. McMurtrie

The pressure oiler, recently developed for the Elrod lead, rule, slug and base caster is here illustrated in a cross-section drawing, simplified in certain details. The black stream shows the flow of oil from the filling cup to the point of feed, in vaporized form, into the mold.



The elevation shown in the drawing is as it would appear from the rear of the Elrod. The filling cup could not be properly shown from this position, so it has been shown at the side of the oiler body. The pressure gauge faces in the reverse direction but for sake of clearness of illustration the face is shown turned in the opposite direction.

The principle and design of the Elrod pressure oiler is such that it eliminates the uncertainty of operation which necessarily accompanies the use of ball-check valves which are submerged in molten metal. With this type of oiler, the satisfactory operation was entirely dependent upon the positive opening and closing of these ball-check valves. Due to the presence of dirt, dross and other foreign material in the molten metal, these valves would frequently fail to close and would allow metal to force its way up past the valves and would clog the oil tube.

The pressure oiler is a device which forces the oil into the oil diffusion tube at a uniform rate, depending upon the amount of pressure used. From the diffusion tube the oil emerges in a gaseous state and is taken up by, and intimately mixed with, the molten metal flowing around the end of the diffusion tube and is carried into the mold. Upon reaching that part of the mold which is below the flash temperature of the oil, this gas is condensed and again assumes the form of oil, which lubricates the inner walls of the mold and the surface of the material.

With the constant flow of oil in very minute quantities, which is possible with the pressure oiler, the outcoming material may be thoroughly lubricated and yet avoid any excess of oil which would ordinarily tend to cause "breaks" in the face. The ideally lubricated material is one that shows a uniform gray sheen over its entire surface. When the material is lubricated in this manner, the life of the molds is greatly prolonged.

The smaller sizes of the face rule, such as hairline on 2-point, will require the least amount of oil, and the larger material, such as 36-point, will require the greatest amount of oil. The delivery of the proper quantity of oil is obtained by moving the pressure adjusting lever to the right (in the present drawing) to decrease the pressure, and to the left to increase it.

The change of pressure is immediately indicated by the pressure gauge. This gauge is marked in such a way that the operator will soon become accustomed to just what pressure setting will produce the desired results on any given material.

A. S. M. E. Exhibit

There will be a demonstration of some of the startling developments of the year in the printing industry at the annual meeting of the Printing Industries Division of The American Society of Mechanical Engineers in New York City on Thursday, December 8. The Society holds its Annual Meeting from December 5 to 9, and the auditorium of the Engineering Societies Building at 29 West 39th Street has been turned over to this industrial division for that night. There will be no papers and no discussions, but the exhibition of some of the new and little known processes will interest the engineer delegates drawn from all over the country as well as those in the lead of the printing industry. Opportunity will be given to see the operation of a metropolitan daily after the night meeting, and the newly-equipped pressroom of *The American* will be visited.

The plans for the Fourth Conference of the Technical Experts in the Printing Industry were drawn up by the Executive Committee of the Printing Industries Division, and the decision was made to hold it in Chicago during the week of June 26, 1933, when the A. S. M. E. will have its semi-annual meeting. This is to be an international conference.

A Letter Alignment Gauge

The requirements for type alignment in trade composition plants are exacting. Satisfying the demands of customers is of paramount importance and the modern trade composition plant should be equipped with the necessary instruments for duplicating exactly any sample or specimen.

John Van Dellen of the Trade-Ad Composition Company, Cleveland, has devised a special type aligning instrument consisting of the aligning gauge, a

broad-field microscope and a lamp to illuminate the specimen being tested for alignment suitably affixed to a base and provided with a means of adjustment to facilitate making the test.

In the photo, 5 represents a Bausch & Lomb 10-power microscope having a 6-in. barrel with constant lenses. The microscope has a large field and as originally purchased was mounted in a slip ring with tripod support. The tripod legs were removed and the slip ring affixed to a 1/8 by 1/2 by 4-in. twisted steel arm, the lower end of which is held to the aligning gauge blade 2, by two 6-48 R. H. steel screws.

The supporting part of the instrument consists of a bell-shaped cast brass electric light fixture. The 1/8-in. pipe and fittings, including the ball socket joints indicated at 4, were obtained from a 10c store. A piece of stereotype flat cast metal 4 3/4 in. square serves as a solid base for the instrument. The lamp used for illuminating the type and edge of aligning blade are like those used on the monotype keyboard. The instrument is approximately 18 in. high.

While operating the gauge adjusting wheel, 3, to align the lower edge of the character on the type, 1, the field of vision is always constant, as the blade, 2, and the microscope, 5, move laterally and in unison.

In order to obtain proper focus, the microscope barrel may be moved up or down through the frictional slip ring mounting. The focusing point normally is about 3 1/4 in. from the lower lens to the type face.

Advantages of Metal Base

By M. Hugo Lindberg*

Occasionally some one will insist that wood is just as good to use on color and register work as metal base. However, the use of large wooden mounting blocks is not so common in the United States and Canada as in other countries. Most of the objections to the use of wooden mounting blocks are similar to the objections that can be pointed out against the use of wood-mounted electrotypes.

Wooden blocks are subject to atmospheric changes, causing the boards to warp, sometimes split, contract or expand, thereby making an uneven printing surface and changing the register of the plates. Metal bases are unyielding and will not warp, shrink or rock. The life of metal base is many times that of wooden blocks and the quality of the finished printing job is far superior to any that can be obtained with the use of wood.

Where there are heavy forms and considerable impression, blocks become pounded down to an uneven surface which causes additional make-ready and loss in press time. The unevenness of the blocks also tends to split the plates. This is very costly as it is necessary to have them repaired, holding up the press while this is done.

The method of tacking plates on the wooden blocks and tapping to register is obsolete, slow and uncertain. In the make-up and register of forms on a metal patent base, each individual plate is registered separately with ease, there being no guesswork, as all hooks have a positive movement and it is possible to put plates into register and keep them in position until the end of the run. On wooden blocks there is no assurance that the plates will remain in the same position until the job is finished.

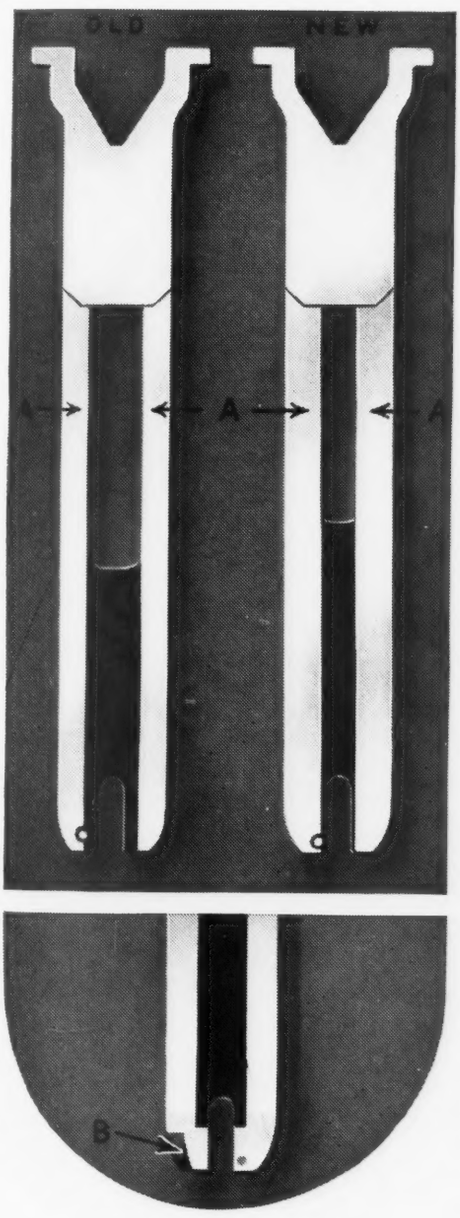
On wooden blocks (the plates being tacked on) it is necessary to pry plates loose when putting on a new set. On metal base it is only necessary to release the hook or the catch on two sides and the plate is easily lifted off. The next set of plates can be put on and the hooks brought up much more rapidly than when it is necessary to tack plates on the blocks.

The accuracy in height of metal bases being far superior to that of wooden blocks permits cutting down the make-ready time about 75%, which is a saving in press time and an increase in production. Metal bases are flexible, which is a decided advantage, as they can be made up into any desired size and used on any and all presses. This is not possible with wooden blocks which are made in standard sizes as it is necessary to use full blocks regardless of the size of form to be printed.

*Printing Machinery Co., Cincinnati, Ohio.

TRADE **LINOTYPE** MARK

NEW—



Contrast the wider, stronger rib of the new Linotype Spaceband at the right with the former two-ribbed band at the point marked A. Notice, too, the patented "clearance cut," B, at the bottom of the band which prevents the band from striking the side-wall area of matrices during assemblage.

. . . 16% STRONGER
. . . IMPROVED DESIGN
. . . SLIDES ARE FREELY INTERCHANGEABLE

The new Linotype Spaceband has not only been improved in design—it is actually 16% stronger than the former two-rib band. Each of the sturdy ribs has been increased in width, making the spaceband considerably less likely to become distorted or to break under hard service.

New slides can be applied to old bands of the same type by your operator or machinist without hand-fitting. They are absolutely interchangeable—make your own repairs at the cost of material only.

Special steel is used in the manufacture of the genuine Linotype band and slide. The band will not buckle or "set"—and if, for any reason, it does get out of "true" it may easily be straightened.

Four thicknesses of genuine Linotype Spacebands are available—each in stock at the nearest Linotype agency:
Extra Thin (J-3568) *Spacing Range:* 2 to 6 points
Regular Thick (J-3556) *Spacing Range:* 3 to 7 points
Special Taper (J-3572) *Spacing Range:* 3 to 8½ points
Extra Thick (J-3560) *Spacing Range:* 3½ to 10 points

MERGENTHALER LINOTYPE COMPANY · BROOKLYN, N.Y.

SAN FRANCISCO · · CHICAGO · · NEW ORLEANS
CANADIAN LINOTYPE, LIMITED, TORONTO, CANADA
Representatives in the Principal Cities of the World

Linotype Bodoni Family

Distinguishing Equipment

(Continued from page 9)

comparisons! How easy it is for the expert to determine savings between modern machines and those which are obsolete!

The shop executive does not need to be reminded that all used presses are not obsolete. He knows the sharp distinction between obsolete and used equipment. All used equipment is by no means obsolete, although much of it is. He recognizes a definite place for good used equipment.

There is no ready measuring stick to determine press obsolescence although when any equipment cannot be made to produce wanted work in successful competition it is obsolete insofar as the industry as a whole is concerned. This is true for the industry even though in a particular plant, where the work is of a specialty nature, such a machine may continue to be a profit-maker. The danger lies in imagining that problems confronted in the plant are unlike those faced by others. Too often minor differences, in no way exceptional, are exaggerated in close perspective until unconsciously an excuse is built for failure to modernize.

The plant executive is charged with responsibility to call attention to these things. It is a safe rule with amazingly few exceptions, that those machines which are commonly regarded as obsolete in the industry are equally obsolete in the plant in which the plant executive works.

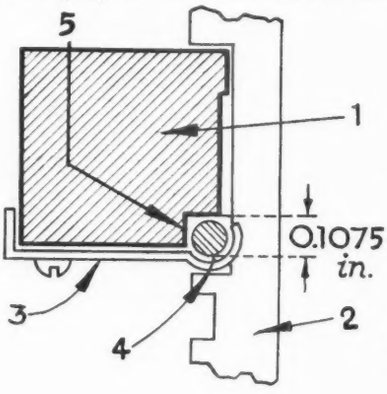
A Remedy for "Double" Letters

Most Linotype and Intertype operators are occasionally bothered with "double" letters, *i. e.*, the keylever remains in the lowest position when the keybutton is depressed which causes continuous response of matrices from that particular channel in the magazine. This is due to dirt or gummy accumulations which suspend the keybar in upward or delivery position by either adhering to the keybar or banking bar or between the keybar and one of the guides. The usual procedure in many plants is to flush the keybar with gasoline ejected from a squirt can to wash out foreign matter. In some plants this procedure is followed by turning an air jet on the parts to assist in removing the cause of obstruction.

While there is nothing new about the scheme for applying a drill rod "breaker" to the keyboard banking bar to eliminate "doubles," many machinists will be glad to have details for applying the device to the keyboards in the plant of which they have charge.

In the cross-section diagram *1* represents the banking bar, 2 the keybar, and 3 one of two clips to hold a length of No. 40 drill rod in the notch cut in the banking corner of the bar *1*.

The method consists of mounting a length of drill rod in a notch 5 cut in the banking corner of the banking bar. The notch lacks 0.010 in. of being as deep as the diameter of No. 40 drill rod (which is 0.097 in. diam. and approximately 1 5/8 in. long) so the drill rod will project 0.010 in. below the lower surface of the banking bar. The keybar 2 banks against the drill rod at point *4*. The drill rod is held in place by two clips *3* fastened at either end of the banking bar. The clips may be made from 0.031 in. phosphor bronze ¼ in. wide and fashioned to shape like that shown at 3 in the diagram. When the banking bar is in position on the machine the clips rest between the spaceband keybar and the keyboard post on one side, and between the lower case "e" keybar and the inside keyboard post on the other side. Each clip is fastened by a 4-48 screw. The clips should be so fitted as to permit the drill rod to have a slight amount of movement when struck by the keybar.



New Intertype Faces

Among the latest composing machine faces announced by Intertype are Intertype Vogue and Oblique and two new sizes of Intertype Ideal News.

The addition of the Vogue Oblique combination to this popular family now makes five series available and it is expected that still further combinations will be announced soon.

• *THIS Paragraph* is set in the new Ten Point Intertype Vogue with Vogue *Oblique* 123456789

• **This paragraph is set in Eleven Point Intertype Ideal News with Bold 123**

• **This paragraph** is set in Twelve Point Intertype Ideal News with Bold Face 1234567890

The eleven point Ideal News was brought out to meet the demand of printers who require this size for law briefs and book work where special legibility is required.

Twelve point Ideal News is recommended for advertising composition, newspaper headings, etc. The unusual legibility of this face also makes the twelve point size particularly desirable for school book composition.

With the addition of the eleven and twelve point, both with bold and italic, the Ideal News family is now made in twelve sizes and seven different combinations with a total of thirty-four different kinds of fonts.

Printing Equipment Manufacturers

Consider these facts when Planning 1933 Advertising

1—PRINTING EQUIPMENT ENGINEER is the only magazine in the industry that reaches mechanical executives exclusively. (Both union and non-union.) The men who specify your product.

2—It stands alone in the field as the only publication whose every reader can recommend, specify, or actually purchase equipment and supplies. (You don't buy waste circulation.)

3—No other magazine in the field reaches mechanical executives exclusively both in the newspaper and commercial plants (rated over $25,000.00). Publication covers both fields.

4—PRINTING EQUIPMENT ENGINEER is unique as the only publication in the field with all of its editorial matter directed exclusively to mechanical executives in all departments. (No front office editorial matter.)

5—Here's the only publication in the industry that is read only by the men the manufacturer's salesmen are calling on every day. (Back up your salesmen!)

6—The most complete list of mechanical executives in the Printing Industry. (We will mail advertiser's literature to any part of list, at cost.)

7—The rates are low—the returns are good—manufacturers certainly get their money's worth when they advertise in PRINTING EQUIPMENT ENGINEER.

PRINTING EQUIPMENT ENGINEER

1370 ONTARIO STREET, CLEVELAND, OHIO

WRITE FOR NEW 1933 RATES

Newspaper Adhesives

By VERNON J. HAYES*

The Adhesive Qualities of Vegetable Glue and Animal Glue for Packing Purposes is Explained. Advice is Given on Preparation of Glues.

SOME years back, it was important for a stereotyper to have a satisfactory formula for making matrix paste and glue for packing felt. Today dry mats have eliminated the necessity of making matrix paste and most concerns buy their packing already gummed, therefore it is rare to hear stereotypers discussing glue and paste.

Animal glue as a base seems to make a more satisfactory glue for packing than vegetable matter. It resists heat, has immediate tack and possesses considerable more adhesive strength. When using vegetable glued packing it is necessary to rub the water into the glue before it becomes soluble enough to stick, while animal glue re-moistens instantly with a slight amount of moisture.

When packing does not hold well, it does not always mean that the glue is not strong enough, but in most cases it is because the glue is setting up too fast. A good glue for packing is one that has immediate tack, but rather slow set, in order to temper the mat. Often you will notice glue peeling from packing. This denotes that the proper tempering did not take place when it was made and if it peels at this stage you can rest assured it will cause trouble when used. It is also possible for a glue that has dried out to peel, but if the proper amount of glycerine has been incorporated then it is not likely that the glue will dry out. Glycerine, however, must be added with care for too much will retard the quick tack and may kill the adhesion altogether.

If you are making your own packing and using animal glue, it is important that it be handled correctly. Ground glue is preferred over flake, because you may heat ground glue after it is soaked in cold water for fifteen minutes, while flake glue must be soaked over night. Be sure you know the water absorption of your glue and whether it is of bone, hide or sinew stock. When you find a particular kind of glue that seems suitable for your purpose, insist upon the same grade every time you order, otherwise you will have no control over its action. For instance, some glues have a water absorption of one part of water to one part of glue, while others will take two to one or more. Comparative parts should be weighed and not measured.

After the glue has been soaked, heat in a regular glue pot. Latest style pots are thermostatically controlled, thereby eliminating the possibility of overheating, but if an ordinary pot is employed, be sure your glue is not heated over 140 degrees Fahrenheit. After the glue is thoroughly dissolved, turn the heat down low enough to keep the glue in a liquid state. It must be remembered that glue is already made when bought in flake or ground form and is heated only to liquify it. If gluing is done during winter months, the room should not be cold, otherwise the glue will chill.

There are several kinds of vegetable matters on the market that are suitable for packing, such as dextrines, British gums, dry paste and liquid envelope gum. We are marketing a low water absorbing corn paste, which has proven very satisfactory because of its immediate tack and indispensability of heat. Bear in mind that vegetable adhesives that have a large water absorbing quality are slow setting and not suitable for making packing as they soak into the felt causing it to curl and contract. Then too after it dries it will be very brittle.

Be particular about the grade of felt you use. A smooth, close-grained felt is essential. Unless the felt is close grained most of the glue will penetrate through the felt causing it to curl and crack.

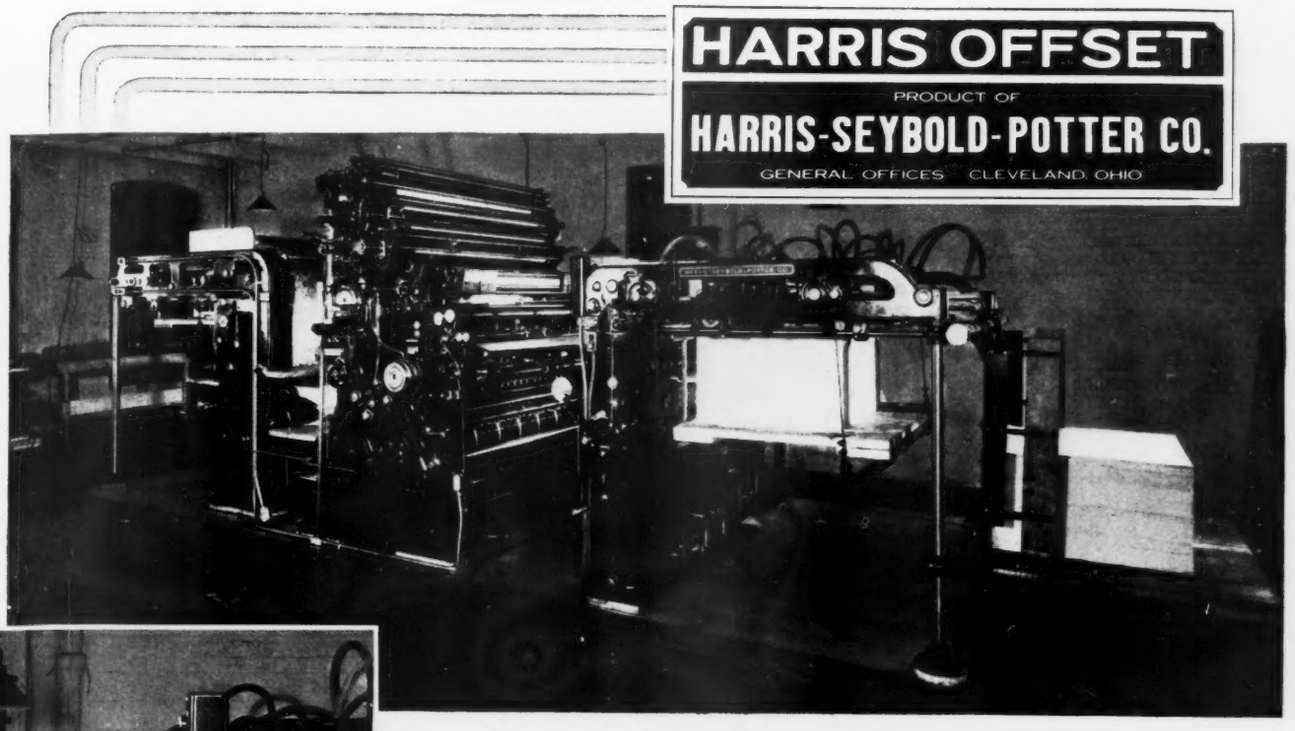
It appears that most of the newspaper press-rooms today are using a resin and oil base splicing gum. Of course, if reels are employed it is essential, but many of those who do not use reels like this kind of gum because it is always ready for use, not drying out like other adhesives and will thin down when heated slightly. Some pressmen like old roller composition or flexible glue which makes a very desirable splicing gum. The base of such is animal glue, glycerine and glucose. Dextrine and ordinary dry paste are used, but not as extensively as the other mentioned adhesives.

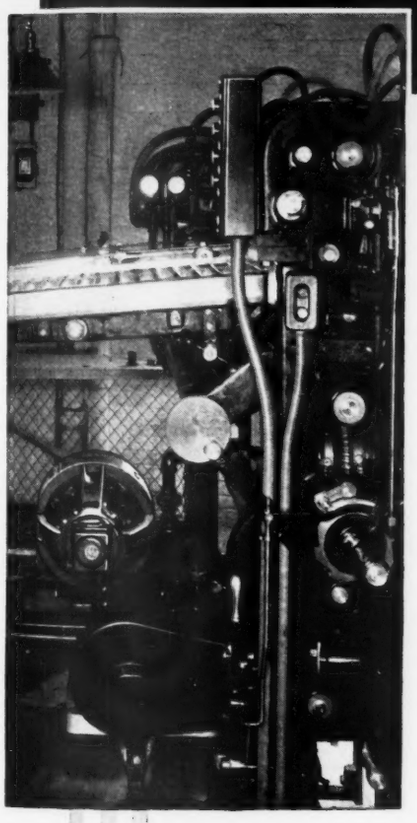
*The Hayes Supply Co., St. Louis, Mo.

Executive Committee Chooses Officers

The Executive Committee of the Printing Industries Division, A. S. M. E., has chosen its officers and members for the coming year. Floyd E. Wilder becomes the new chairman, Edward Pierce Hulse remains as Secretary, and the new member for the five-year term is Edward Epstean, the term of Arthur C. Jewett, having expired, but he remains as an associate member of the committee as well as chairman of the Research Committee. It was voted to have the Division join the Inter-Society Color Council.

Dependable Electric Equipment For Any Type Of Press





AGAIN General Electric's ability to supply the RIGHT MOTOR and the RIGHT CONTROL for any type or size of press is exemplified by this installation on a Harris Offset No. 41, LB, single-color, 38 by 52 printing press.

This press is operated by the following G-E d-c. printing-press equipment, all of which meets the rigid specifications of the Harris-Seybold-Potter Company:

Motors

Main-drive	Type CD 7½ hp.	adjustable speed
Feeder-blower	Type BD 1½ hp.	constant speed

Control

Main Motor	Type CR-6344 semimagnetic with preset speed, and five push-button stations
Feeder-blower	Type CR-4065 automatic starter with two push-button stations

You who know presses and printing realize how important it is that electric equipment be perfectly matched to your press. That's why it will pay you to swing open the door of the G-E Printing Equipment Section and take advantage of proved engineering service; sound equipment values; motor and control equipment from one manufacturer; service shops, warehouses, and sales offices everywhere — all represented there, ready to serve you. General Electric Company, Schenectady, New York.

201-240

GENERAL ELECTRIC

Matrix Cleaning Methods

C. B. N., Chicago, Ill., inquires as to methods employed in cleaning linotype matrices.

Ans.—Any one of several methods may be used in the periodic cleaning of matrices. The common method is to run out the matrices and place them on wooden trays obtainable from the manufacturers of the machine. Use an electrotyper's polishing rubber or Faber's No. 104 typewriter eraser and brighten the reference side and the upper and lower lugs. Do not push the rubber into the matrix cells on the casting edge of the matrices—just clean the casting surface next to the upper and lower lugs.

If the matrices in your plant are coated with the Black-and-White process avoid the use of ammonia when cleaning the matrices or magazine, as this liquid seems to be a natural solvent for the black coating. The Matrix Contrast Corporation will buff the upper and lower matrix lugs if requested to do so.

After polishing the matrices it is a good plan to remove all rubber particles. This can be done with a compressed air jet or a small brush.

In cleaning the magazine, first pass a dry brush through the channel plates to remove the dust. Then apply benzol or carbon tetrachloride between the channel plates to remove any greasy or gummy accumulations while brushing out the magazine. Avoid the use of gasoline for this purpose since the bulk of different brands leave a greasy residue in the magazine which is not conducive to reliable matrix response. If you insist on applying dry graphite after cleaning the magazine for polishing purposes, be sure to remove all free graphite particles. Polishing magazine channel plates with dry graphite does not afford any permanent advantage in matrix response. After cleaning the magazine, place a light at one end and peer through from the other end of the magazine to see that all gummy deposits (spaced about 1¼ in. apart) have been removed from the upper channel plate.

If a magazine and matrices are in daily use, a cleaning every three months is advisable. At the time of cleaning a font, also clean the assembler entrance by means of a wiping cloth moistened with benzol or carbon tetrachloride. Also clean the distributor conveyor screws weekly to remove oil that may have worked out upon the screw threads from the bearings.

Oil the distributor conveyor screw bearings sparingly every two weeks. Use dry graphite to lubricate the assembling elevator, delivery carriage and transfer slides. Apply mold polish sparingly to the back mold wiper. Use gasoline and graphite to saturate the front mold wiper felts. It is just as well to avoid applying any oil to the cup above the mold slide. The slide can be lubricated weekly. Apply a small quantity with the fingers at the time the mold slide is pulled forward for cleaning purposes. The mold slide parts are subjected to heat transmitted from the metal pot. When oil is applied to the cup the heat from the metal pot thins it out and causes it to flow too freely into the ejector slide. The oil will then be transferred to the ejector blades and molds and foul the matrices. In some plants dry graphite is used for lubricating the mold slide. A major problem in caring for a line-casting machine is to lubricate all the parts properly so as to avoid fouling the matrices with the various lubricants used.

Some machinists buff the reference edges and lugs of matrices at the time magazines are cleaned. In order to do this, order a distributor bar from the manufacturer, *i. e.*, a bar with a full set of teeth rails but one on which the combinations have not been broached. This is used to hold a quantity of matrices while passing the lugs over a wire buffing wheel. A fine wire buffing wheel should be used. A coarse-wired wheel will remove some of the brass from the lugs and make them undersize.

SATISFIED WITH CERTIFIED

CERTIFIED DRY MATS

Certified Acceptance

The dependable performance of Certified Dry Mats over a period of years has brought about their acceptance by publishers and their stereotypers.

In hundreds of plants "Certified" on a dry mat has become synonymous with "satisfied." Their use insures well printed papers, day in and day out, without placing any extra burdens on the stereotype foundries.

Certifieds mold easily, dry quickly, are singularly free from buckles and chills, and strengthen the link between composing room and pressroom.

We respectfully invite you, too, to get acquainted with Certifieds by trying some in your own plant under your own working conditions so that you can judge their relative value.

And remember, there is now a Certified Dry Mat to meet your purse and purpose.

CERTIFIED DRY MAT CORPORATION

338 MADISON AVENUE • • • • NEW YORK, N. Y.

For dependable stereotyping---use Certified Dry Mats

Made in U. S. A.

Ideal Enlarges Chicago Plant

The Chicago plant of the Ideal Roller & Mfg. Co., at 2512 West 24th St., Pilsen Station, is having an addition added. When completed a portion of the building will be given over for the use of the research and development department. The balance of the floor space will house equipment for improved rollers and other lines handled by their company.

Officials of the company feel that since business has been very good in the past, that the enlargement of plant and equipment should be taken care of now for expected increased business in the future.

Will Try Slower Speed

At the symposium in the Engineers' Auditorium, New York City, at which some of the applications of the Electric Eye were demonstrated, Walter Howey, inventor of automatic engraving, stated that engravings had been made too quickly and that two speeds would be tried, including a slower speed for a picture of much detail.

Dry Mat Manipulation

(Continued from page 12)

tionary object is used for this purpose, there is danger of scuffing the surface of the mould. The mould, in its green state, placed face up on something soft, will respond readily to this action.

Positioning mats in this way should be done while they are about half dry or green.

When a number of spaces have shallowed, requiring precious minutes to rub the printing surfaces back into place, it is suggested that the mould be cast in its green state as very little resistance occurs against the weight of the metal when some moisture remains in the mould. Pour the metal slowly, using utmost care that the metal does not fly out of the casting box. Of course, the plate will be chilled and useless, but the weight of the metal will have forced all the concavities back into place.

Bear in mind that it requires pressure and plenty of it, to force concavities back into proper position. Fortunately the printing surfaces are weaker than the space depths (proven by "green casting") but the spaces must be carefully protected by backing felt. Forming machines exert pressure evenly to all parts of the mould—just as much down into the printing surface as to the spaces—and fully compensate for the surface variations of the mould.

There is considerable variation between the printing surface and the blank spaces of advertising matter and it is easy to appreciate why such a variation will not permit as much pressure to the printing surface of the mould as is applied to the much higher space depths between two comparatively smooth and hard surfaces of the scorcher. The best that may be hoped for in applying pressure between two surfaces, is to hold the mould as securely and as evenly as possible while drying.

Concavity is also developed by uneven heat of the scorcher. It causes an uneven drying and shrinkage, setting up uneven contraction stresses which distort the mould. A vivid example of this condition may be observed by allowing a mould to remain in the scorcher until it is charred. Observe the places in the could directly in the charred areas, particularly the small spots where the concavity may be seen readily. The same result is in proportion with an uneven dry. The scorcher is the most common source of "buckles" or distortion. There are three primary factors to be observed in

AMERICAN PUBLISHERS SUPPLY

REDUCED PRICES ON

Asbestos Cloth for Matrix Scorchers
Wire Woven Cemer Traveling and Cylinder Blankets
Stahi Drum Covers
Speed-Trent and Wood Covers in Cloth and Paper

Special Sizes Cut at List Price

SAMPLES AND PRICES SENT UPON REQUEST

AMERICAN PUBLISHERS SUPPLY P. O. Box 131 West Lynn, Mass.

"Matrix Scorcher Specialists, Curved or Flat"

FORM-O-SCORCH MACHINES

HEY JOHN

"Send this Metal Sample to Imperial!"

"I DON'T KNOW what I would do if I could not have my metal analyzed periodically. Ever since I have been using Imperial I have been sending samples for analysis, and as a result my metal has been in perfect balance since I started using Imperial. This means I have a minimum of dross, less fuel consumption, and freedom from machine and metal troubles. This regular metal analysis is one of the features that I like best about Imperial. That is the reason why I

stick to

Imperial METAL

THE IMPERIAL TYPE METAL CO.
Philadelphia · New York · Chicago · Los Angeles

the process of drying the mould: Provide even heat all over the could, secure even pressure against the mould and provide even and rapid escape of the moisture as it leaves the mould.

When the necessary scorching or forming equipment is not to be had to compensate for the surface variations of the mould, it is suggested that the pressure of the scorcher be cushioned with asbestos cloth. I discussed a very good plan for cushioning the mould in the June issue of PRINTING EQUIPMENT ENGINEER. This was the "Floating Asbestos Cover." I know of a very good plan for adapting this same plan to the tubular scorcher and will be glad to have the details forwarded to anyone who cares to write in for it.

WRINKLES AND PINCHES

Wrinkles may develop in moulding and in casting. The moulding wrinkle (where the cushion twists and turns under an unnatural stress of the moulding machine) may be relieved by filling in the deep spaces of the form and if no blanket guide or drag roller is used, one may be provided with an old paste mat roller or paper core.

The casting box wrinkle develops because of the attempt to crowd into the box more moulded area than it will accommodate. Moulds with more than the average amount of backing felt must be trimmed short. Avoid forcing moulds into the box. Wrinkles may develop anywhere in the cast.

"Pinching the mould" is usually caused by the ring gauge, side sticks or tail pan pinching into the bolsters, any of which forces them down, and the printing surface suffers. The bolsters should be no deeper or wider than is absolutely necessary for the plate margin. Unfortunately, some of the manufacturers of chases have overdone the clearances which, of course, aggravates this trouble. I suggest that such bolsters be flattened down or the gauges, clips, ring or tail pan may be adjusted as required.

"Binding" is a source of trouble closely allied with pinching. Binding prevents the free seating of the mould to the back of the casting box. Low corners, depressions and concavity of the weak parts of the mould, may be all traced directly to a bind in the casting box. The tail pan is also a very common offender. The mould, in all cases, must be permitted to shift freely into place.

How Mechanical Executive Can Help

(Continued from page 13)

advertising is a matter of concrete financial importance to the newspaper publisher, you may well ask, "How can we improve our advertising typography without undue expense?" For it is only a matter of plan and organization. The newspaper composing room can produce just as fine composition as advertisers could desire, if the publishers want them to and the advertisers permit them to.

The composing room executive can well point out to his chief, that his department can be regarded as a *financial asset* rather than as an *expense* to the publishing business.

There are many practical aspects of this question which we might discuss, but there are two measures of primary importance.

First, it must be understood that type is a style product, just as ladies' hats are a style product. A hat two years old is hopelessly out of date. With type, the situation is, however, not as serious, for any type which is good today will almost invariably be good five years from now, though I cannot assure you that it will be good twenty years from now. However, I think many of the typefaces in the average newspaper composing room are more nearly of the vintage of 1910 than that of 1930.

Do not be apprehensive that you will have to scrap your type equipment at frequent intervals. But (appreciating the

style character of typefaces) set aside a small sum each year to season up your selection and keep it reasonably up to date. If you are careful about the new typefaces you add and get good advice on their selection, it will be found that this annual expenditure will be quite modest and the results astonishingly satisfactory.

Incidentally, as part of this program, I would advise getting rid of the ugliest types which you have, so that compositors will not get your good advertisers into trouble, by using them. Select, therefore, a few good typefaces and stock them in an adequate range of sizes, certainly up to 72-point. Advertisers today like to use large type and it is clearly to the interest of the publisher that they should use it, for large type requires more space for its proper display.

The second point is to provide for competent layout of all advertising copy before it goes to the type cases or keyboards. If you have a newspaper of considerable size, the layout job will keep one man pretty regularly employed. If you operate a small composing room, layout may require the time of one of your compositors for but a few hours a day.

Do not say that you cannot afford the expense of that additional time. It is not additional. When you hand to a compositor a piece of copy that has not been laid out in detail, his first duty is to decide on the arrangement of the advertisement and the typefaces in which it is to be set. In other words, he must make a layout either in his mind or on paper before he actually starts to set any type. This time, of course, goes into the total time he spends on the job. If this compositor has little typographical aptitude, he will produce a poor plan and take a long time in producing it.

Let us presume, however, that you find one member of your force with a considerable share of typographical ability and a distinct interest in layout. This man can handle all the incoming copy, plan it intelligently, and perform his work with dispatch. In fifteen minutes he will make a comprehensive working layout of an advertisement on which the average compositor would take half an hour before he got it under way. The net result therefore of transferring layout into specialized hands would be a saving of a quarter of an hour on that particular advertisement. We thus see that layout is not an expense but an economy.

Where, you may inquire, are we to find such a man? Like as not you will find a candidate for this job on the floor of your own composing room. You may find on your staff a compositor who is taking the printing trade journals and studying them, who is reading a book on typography occasionally, and who is spending a little of his own time now and then experimenting with type arrangements. Often he may be one of the younger men on your staff. Given a chance, such a man may be made exceedingly valuable to your advertisers and, in consequence, valuable to you.

When the compositor you select for this function becomes skilled in his job, he can do more for the advertising department than see that incoming copy is intelligently interpreted in type. On slack days he can go ahead and prepare layouts of specific advertisements for prospective advertisers you are trying to sell. He might even, in his odd time, set up a couple of proposed advertisements to submit to a prospect for approval.

I cannot discuss here many of the principles of typography by which the appearance of newspaper pages may be improved, but I cannot neglect the opportunity to urge the great virtue inherent in upper and lower case composition as compared with the same copy set in all capitals. National advertisers have certainly learned this lesson thoroughly. I think there is no question in any quarter regarding the superior legibility of upper and lower case. Judging by evidence all about us, however, those responsible for newspaper typography have not yet taken full advantage of the greater legibility and forcefulness to be thus attained.

BURGESS CHROME MATS

«The South's Oldest Newspaper»
Appreciates

BURGESS SERVICE and QUALITY

●

August 20, 1932.

The Burgess Cellulose Co.,
Freeport, Illinois.

Attention Mr. D. T. Stephenson

Dear Sirs:—

I am a little tardy in writing to thank you and your Company for the splendid service rendered us in sending your Mr. Hitch to be with us on our change-over from the Wet Mat to the Dry Mat system in our stereotype room.

Mr. Hitch is a splendid fellow and of much help to us. We are getting excellent results and have had nothing but pleasure in that department. No buckles up to date. We thank you.

Very truly,

Signed—Frank A. White, Supt.,
The Augusta Chronicle,
Augusta, Georgia.

●

Why wait longer for your demonstration?
Write now to

BURGESS CELLULOSE COMPANY
Freeport, Illinois

BURGESS CHROME MATS

BURGESS CHROME MATS

BURGESS CHROME MATS

Latest Printing Equipment Mechanisms

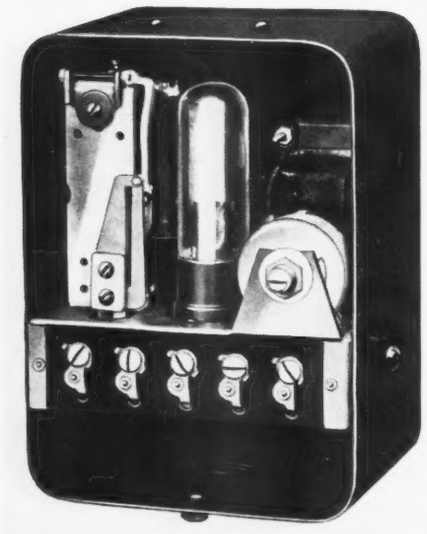
Babcock Sheet-Feed Two-Color Rotary Press

In the description of the new Babcock Sheet-Feed Two-Color Rotary Press, October issue, the press was described as capable of producing upwards of 3000 impressions per hour according to the size and kind of work. The statement should have read that this press has a capacity of 3000 and upwards impressions per hour depending upon the type of work being run.

New Midget Photoelectric Relay

A new low-priced photoelectric relay has been announced by the General Electric Company, Schenectady, N. Y. This relay is applicable to installations where practically complete interception of the light beam is made, since changes of light intensity of at least 50 per cent are necessary for successful operation. The unit is particularly adaptable to counting applications inasmuch as the sensitive relay contacts will handle directly the usual types of magnetic counters. The unit will operate on light impulses of one-fifteenth of a second duration. The relay should also find many applications in the limit switch field.

The new relay, designated as the CR7505-K1, consists of a phototube, a Pliotron amplifying tube, a sensitive relay, an adjustable potentiometer, and associated apparatus, all



mounted on a steel base. It is used to control a circuit in response to an increase or decrease in the amount of light falling on the phototube.

The unit is complete in itself without an enclosing case, but a drawn shell enclosing case is provided to allow mounting on a vertical support. The base assembly may be removed from the case by unfastening two screws, although the unit may be wired and adjusted without taking it from the case.

A cover with one opening for the phototube and another for the potentiometer adjustment is provided with the unit. This cover is fastened to the case by means of a binding screw and dowel pins and is easily removed. The cover may be replaced by another with an optical system, should the application require it.

Where the interrupting capacity of the sensitive relay contact is not sufficient to handle the device to be controlled, a small contactor or magnetic switch may be interposed between the sensitive relay and the controlled device.

Mergenthaler Announces New Matrix Cabinet

A compact but roomy cabinet has been announced by the Mergenthaler Linotype Company—for those seldom-used fonts and special characters. The ten-case cabinet is constructed of steel and durable hard wood and designed to fit under the sorts stacker of the Linotype, within easy reach of the operator while seated at the machine.

Each of the ten matrix cases, 15 inches wide by 19½ inches long, has fifty-eight compartments and each case accommodates a full font of caps, figures and points up to and including 36 point faces. Thus the cabinet offers 580 compartments for the storing of job fonts, sorts matrices, advertising figures, cap fonts (when lower case fonts are run in auxiliary magazines), side sorts and miscellaneous characters, plus a small drawer at the bottom for the storing of matrix slides, slide blocks, tools and so forth.

The cases are inclined toward the operator, at an angle that keeps the matrices upright and enables him to assemble and distribute them easily and quickly. The inclined top of the cabinet makes a good copy stand, a handy place to store catch lines, or an excellent resting place for one of the cases when considerable composition is to be produced in one face. Each case is equipped with a safety stop, with spring release, which keeps it from being drawn too far out accidentally, but permits it to be removed and replaced with ease when desired.

The frame of the cabinet is made of fire-resistant steel, with a dust and dirt proof finish in olive green. The cabinet is 24 in. long, 17½ in. wide and 26 in. high—just the right size to fit under the sorts stacker of the Linotype.

New Direct-Reading Recording Hygrometer

Before the Humidigraph was introduced, the most common means of determining relative humidity was the wet-and-dry bulb or sling psychrometer. To take the reading with a wet-and-dry bulb psychrometer, it is necessary to whirl the instrument several times, or to fan the wet bulb vigorously. Water is evaporated from the wick—this process of evaporation cooling and contracting the wet bulb mercury column, thereby causing a reading the wet thermometer lower than that of the dry thermometer. By means of the dry bulb temperature, the difference in the two thermometer readings, and a mathematical table, the relative humidity can be computed.

Bristol's Humidigraph avoids all this trouble and bother. It is sensitive, permanently accurate, and sturdy. It registers minor fluctuations in relative humidity within a few minutes. No adjustments in service are necessary.

This instrument utilizes as the actuating and measuring element a unique vapor sensitive or hygroscopic device that essentially consists of sensitive wood fibres built up on a nickeled wire screen wound in the form of a spiral. As changes in the relative humidity occur, they affect the hygroscopic element, creating a deformation that causes the free end to

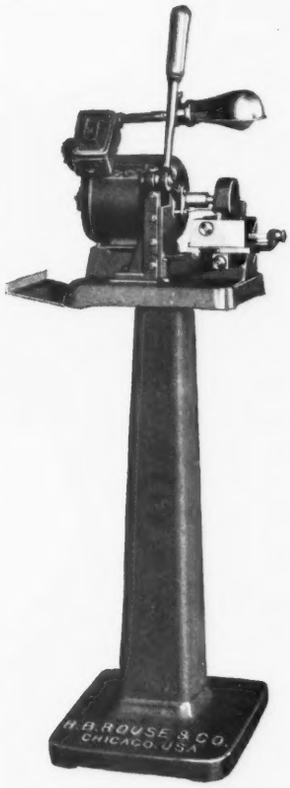
move or revolve about the longitudinal central axis of the spiral. This movement or rotation is transferred by means of a simple linkage to the pen arm, which in turn continuously traces an ink record of relative humidity on the chart.

Hairs, springs, rollers, and other delicate parts likely to get out of order are eliminated from the construction. A special ageing and treating of the wood fibres assures the maintenance of the original initial calibration, accuracy and dependability.

Literature giving interesting details of construction and application is obtainable from the manufacturer, the Bristol Company, Waterbury, Conn.

Rouse Type Mortiser

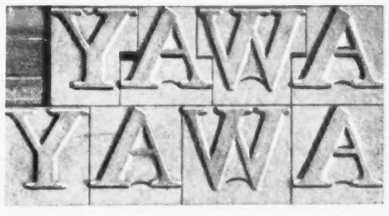
H. B. Rouse & Co., 2214-16 Ward St., Chicago, Ill., manufactures a type-mortising machine. This motor-driven machine, in both pedestal and bench models, mortises type of all sizes with interlocking right angles to exact points. Letters can be matched on the left, right or both sides to exact precision by a simple point-adjusting instrument.



The poor spacing which usually results from the use of initial letters and foundry sorts can be eliminated, it is claimed, by the use of this machine, which is designed especially for the purpose of fitting letters to avoid a distorted appearance.

The spacing possible with sorts mortised on the Rouse Type Mortiser is demonstrated in the word "away," which appears "before and after mortising" in the photograph reproduced here. Type treated in this manner has an improved typographical appearance and possesses mechanical advantages through perfect justification.

Poor justification, pi, type spoilage and indifferent results which follow the use of type mortised on machines designed for other purposes are all obviated by the use of a machine designed especially for the purpose.



The type to be mortised, securely clamped to a slide which can be quickly moved to the right or left of the cutter, is easily adjusted in any direction by points and then locked in the desired position. The cutter then is depressed by means of a leaver, which produces each mortise to exact measurements.

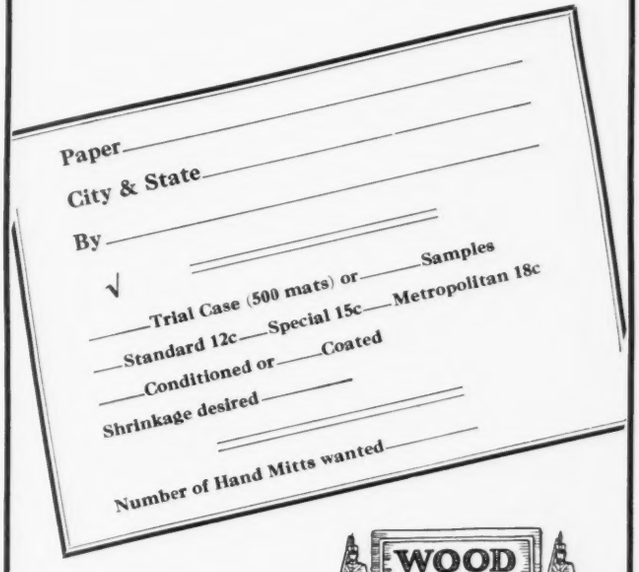
Louisville Courier-Journal

An Exclusive User Of Wood Dry Mats for 14 Years

1918—in June—this well-known newspaper made its first trial of Wood Dry Mats. By November the *Courier-Journal* was using Wood Mats regularly.

"Since then, we have used these mats exclusively with the exception of an occasional trial case of other mats," says their letter.

A similar trial is open to your paper. Use the coupon for a sample lot of mats—and a supply of hand mitts.



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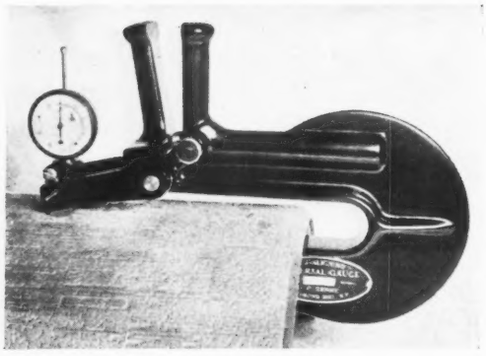

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Model "B" shown here, is an all-purpose saw trimmer for large and or small plants. It saws and trims at a single operation, miters, under-cuts to points, grinds, makes outside and inside mortises and may be equipped for beveling, rabbeting, surfacing, and other special operations. For smaller plants, ad-alleys, or as an auxiliary, a smaller machine, Model "A," is offered.

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Intertype Autospacer

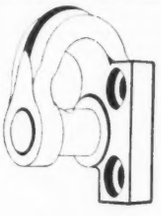
In a practical test in the composition of centered and quadded lines the Intertype Automatic Quadding and Centering Device showed a saving of 75 per cent in time as compared to the method of setting centered lines in the usual way. In the composition of ordinary book composition including only the average number of quadded lines the saving in time amounted to 10 per cent.

The same copy was used and the same operator set the copy, both with and without the device. A stop watch was used and the time carefully recorded.

The New Intertype Quadding and Centering Device was first advertised in March, this year, and it is said that 75 per cent of the new machines sold by Intertype since that time have included this improvement.

New Knife Wiper Lever Bracket

The Linotype Parts Corporation, 270 Lafayette St., New York, New York, is furnishing a new style knife wiper lever bracket for Linotype machines. It is applicable to those machines having the lever style knife wiper which is operated by a roller on the first elevator slide. The new bracket greatly prolongs the life of the lever. Levers which do not operate properly can be made to work simply by applying this new bracket. The bracket provides a bearing for the lever on two sides which confines friction to the bearing pin which is fastened rigidly in its bearing by a screw. It is claimed that no irregular sidewise movement of the lever can be permitted by the use of this bracket. The bracket is heavily constructed of brass and is provided with a steel bearing pin. Easily applied. No special tools needed to apply to outstanding machines.



October Printing Patents

(Continued from page 14)

composed line is presented to the mold, and safety devices for preventing the presentation of the composed line to the mold when the level-determining means are improperly adjusted with reference to the mold in use, the safety devices including variant banking blocks associated with the respective molds and cooperative arresting portions carried by the transporter.

1,880,361. INKING ROLLER. Hans C. Schroeder, La Grange, Ill., assignor to Goss Printing Press Company, a Corporation of Illinois. Original application filed Mar. 12, 1928. Serial No. 260,979. Divided and this application filed Jan. 24, 1930. Serial No. 423,065 4 Claims. (Cl. 101—348.)

1. An inking roller or the like including in combination an inner tubular supporting member, a tubular roller medianly enclosing the supporting member, thrust bearings therebetween, and means acting on the supporting member for longitudinally reciprocating the roller.

1,880,362. PRINTING PRESS. Ernest James Smith, London, England, assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed July 7, 1928. Serial No. 290,906, and in Great Britain Jan. 13, 1928. 4 Claims. (Cl. 242—75.)

1. Web roll supporting and controlling mechanism including in combination a pair of angularly movable supporting arms for supporting a web roll, a pilot roller movable in accordance with the tension of the web fed from the web roll, a brake for the web roll mounted on one angularly movable arm and means for connecting the brake with the movable pilot roller including a cable connected at one end to the brake and at its other end to a support movable by the pilot roller and a take-up member intermediate the ends of the cable and movable by movement of the arms to compensate for different positions of the arms to keep the cable taut.

1,880,363. PRINTING PRESS. Ernest James Smith, London, England, assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed July 7, 1928. Serial No. 290,907, and in Great Britain Jan. 13, 1928. Renewed Mar. 3, 1932. 8 Claims. (Cl. 242—58.)

4. Web roll supporting mechanism including in combination relatively movable means for rotatably supporting a pair of web rolls from one of which a running web is fed to a printing press, means for moving one of the rolls into contact with the other while joining the running web to the other web roll and means for resiliently pressing the expiring web roll against the other web roll.

1,880,369. MULTICOLOR PRINTING PRESS. Allan F. Turck, South Orange, N. J. Filed Aug. 6, 1931. Serial No. 555,451. 13 Claims. (Cl. 101—183.)

1. In a printing press, a plurality of printing couples disposed to present a circular printing path, and a rotatably mounted cylindrical sheet-carrier movable between the members of the couples and having its outer surface alined in the printing path.

1,881,589. WEB ROLL CONTROLLING DEVICE FOR PRINTING MACHINES. Albert J. Horton, White Plains, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a Corporation of New York. Filed Apr. 27, 1929. Serial No. 358,481. 13 Claims. (Cl. 242—75.)

1. In a web roll controlling device, a floating roller moving transversely to its axis in response to variations in the slack of the unwinding web, a braking mechanism connected thereto, which acts to restrain the rotation of the roll when the web slackens and to reduce the restraint when the web tightens, and a retarding device arranged to permit free movement of the floating roller when the web tightens, and to restrict such movement when the web slackens.

1,881,648. METHOD OF SEPARATING THE RISER FROM A STEREOTYPE PRINTING PLATE. Hans C. Jordhoy, North Plainfield, N. J., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Original application filed May 12, 1926, Serial No. 108,632. Divided and this application filed Dec. 9, 1929. Serial No. 412,623. Renewed May 9, 1932. 10 Claims. (Cl. 22—2.)

1. The method of preparing a stereotype printing plate which consists in casting it in a mold provided with a movable gate and breaking the riser off the plate at the edge of the plate by movement of the gate.

1,882,044. BOOKBINDING MACHINE. Eugene R. Seiter, Ridgefield Park, N. J., assignor to T. W. & C. B. Sheridan Company, a Corporation of New York. Filed Sept. 11, 1931. Serial No. 562,234. 20 Claims. (Cl. 11—1.)

1. In a bookbinding machine mechanism for automatically applying backlining components to the glued backs of books, comprising opposite guide walls between which the book may advance edgewise to and from applying position with its back exposed and having means to adjust them for variations of book thickness, a book compressor or bar movable relatively to the walls to press upon and release the exposed part of the book, spring means to engage the compressor with the book during application of a component, and timed means to retract the compressor during advance of the book.

1,882,480. INKING ROLLER. Martin W. Brueshaber, Chicago, Ill., assignor to Goss Printing Press Company, a Corporation of Illinois. Filed Nov. 8, 1929. Serial No. 405,704. 11 Claims. (Cl. 91—67.8.)

1. An ink roller for printing presses including in combination a shaft, a plurality of alined hollow members rotatably mounted on the shaft, bearings near the ends of each tubular member, a shoulder centrally of the shaft for limiting the movement of the hollow members towards the center of the shaft, and means limiting the outward movement of the hollow members.

1,882,895. MACHINE FOR AUTOMATICALLY PRODUCING AND ASSEMBLING SIGNATURES. Earl D. Rader, Bedford, N. Y., assignor to Dexter Folder Company, New York, N. Y., a Corporation of New York. Filed Oct. 18, 1928. Serial No. 313,364. 92 Claims. (Cl. 270—54.)

1. In an apparatus, the combination of means for feeding, folding and separating a sheet into a plurality of signatures, and means for assembling the signatures on their folded edges with similarly disposed signatures of sheets successively fed, folded, and separated by the first named means.

1,882,933. LATE NEWS PRINTING DEVICE. Oscar Charles Roesen, Brooklyn, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Aug. 22, 1930, Serial No. 476,996. Renewed Mar. 31, 1932. 7 Claims. (Cl. 101—407.)

1. In a printing device, the combination with an impression cylinder having a portion of its surface of complete annular shape and another portion of less than cylindrical shape and an impression blanket adapted to be placed on either portion of the cylinder.

1,882,962. APPARATUS FOR MEASURING THE THICKNESS OF PAPER. Frank Sawford, Vancouver, British Columbia, Canada, assignor of one-half to Frank Sawford, Jr., Vancouver, British Columbia, Canada. Filed Nov. 19, 1928. Serial No. 320,386. 2 Claims. (Cl. 88—14.)

1. Apparatus for measuring variations in the thickness of a sheet of paper, which consists of a lamp, means for concentrating a beam of light therefrom, and for throwing it against a sheet of paper, a photo-electric cell on the opposite side of the sheet of paper, an electric circuit for the photo-electric cell, means for measuring variations in the current in the circuit, and a shutter interposed between the lamp and the photo-electric cell normally intercepting the light from the lamp, and means operated by the paper for holding the shutter out of the path of the lamp.

1,883,152. FOLDING MACHINE. Robert J. Waterworth, Sidney, Ohio, assignor, by mesne assignments, to Dexter Folder Company, New York, N. Y., a Corporation of New York. Filed July 29, 1926. Serial No. 125,777. 28 Claims. (Cl. 270—62.)

1. In a folding machine, a plurality of knife folders successively arranged at right angles to each other, a plurality of loop folders each parallel with one of the knife folders, and means for selectively guiding sheets from a knife folder to one side of its associated loop folder or through the latter for delivery to a following knife folder.

1,883,221. MULTIPLE CASTING AND FINISHING MACHINE FOR STEREOTYPE PRINTING PRESS. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed July 9, 1926, Serial No. 121,403. Renewed June 11, 1932. 3 Claims. (Cl. 22—3.)

1. The combination with a finishing machine mounted to turn on a pivot, of a plurality of casting machines, each one arranged in stationary position with its axis in alignment with the pivot to deliver its casting to a finishing machine located in line with the pivot.

1,883,222. PAPER ROLL BRAKING DEVICE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Jan. 12, 1931. Serial No. 508,046. 4 Claims. (Cl. 242—75.)

1. In a braking device for a paper roll, the combination of means for applying pressure for braking purposes to various points unconnected with and isolated from each other at different distances from the center of the paper roll and on the end surface thereof, whereby the amount of braking action will be dependent upon the diameter of the roll.

1,883,223. MEANS FOR CLEANING CONVEYOR CHAINS. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Dec. 23, 1930. Serial No. 504,229. 8 Claims. (Cl. 101—423.)

1. The combination with a traveling conveyor for delivering newspapers from the press delivery, of movable means located in position to operate on the inner side of the return strand of the conveyor for removing particles of foreign matter adhering thereto.

1,883,225. AUTOMATIC DISCONNECTING DEVICE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Nov. 22, 1928. Serial No. 321,262. 3 Claims. (Cl. 192—56.)

1. In a device of the character described, the combination with a driving member having a fixed projection eccentrically arranged and a driven member, of a lever pivotally mounted on the driven member and having a part on one side of this pivot normally in the path of the fixed projection to transmit motion therefrom to the driven member, a rod pivotally connected with the lever on the other side of the pivot, a spring on the rod for holding the lever in driving position, the spring being capable of yielding to allow the lever to be forced out of driving position when undue resistance is encountered and means for holding the lever in inactive position until reset.

1,883,226. FOLDING MECHANISM. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Original application filed Oct. 28, 1926, Serial No. 144,877. Divided and this application filed Nov. 18, 1929. Serial No. 407,963. Renewed May 11, 1932. 13 Claims. (Cl. 270—5.)

1. In a folding machine, the combination with a former and a drag roll mounted to deliver thereto, of a series of propellers, levers on which the propellers are mounted, springs for individually operating the levers to force the propellers against the drag roll, a shaft having projections on which the levers are pivoted and provided with a handle, whereby the shaft can be turned to move all the propellers into or out of contact with the drag roll, and means for holding the handle in either extreme position, the springs being adjustable independently so that the operation of the handle will not affect their adjustments.

1,883,227. COLOR PRINTING PRESS. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Sept. 2, 1930. Serial No. 479,249. 5 Claims. (Cl. 101—176.)

1. In a multi-color printing press, the combination with a hard surfaced printing cylinder, a plurality of soft surfaced color printing cylinders directly in contact therewith and separate inking means for each color printing cylinder, of an impression cylinder located in direct contact with the printing cylinder.

1,883,256. PRESS UNIT DRIVE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Feb. 18, 1926, Serial No. 89,070. Renewed June 2, 1932. 1 Claim. (Cl. 270—5.)

In a printing system, the combination with a plurality of press units arranged parallel to each other and registering with each other and a folding mechanism located at the end of the series so that the whole series is in alignment but the driving shafts of the press units and folder are all parallel, the driving shafts for the press units each being the shaft of one

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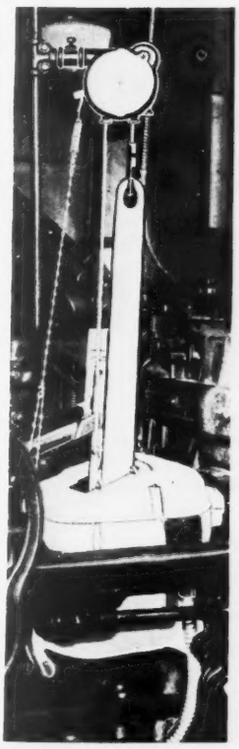

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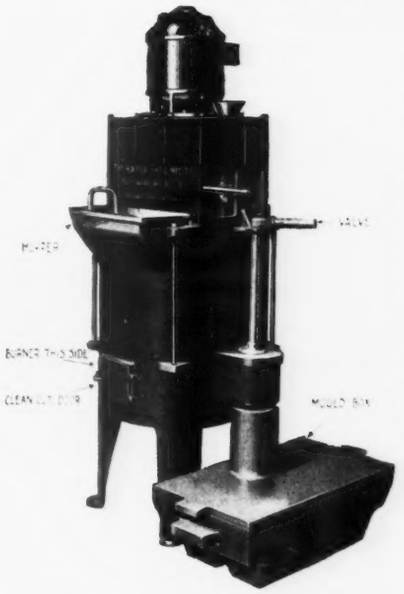
is used in stereotyping departments for the direct reclaiming of new metal from dross.



It occupies but two and one-half feet of space and is placed preferably near the larger stereotype pots from which the dross is skimmed. The dross can be immediately thrown into the Renovator, thus eliminating storage of same in cans and the packing for shipment to the smelter.

The Monarch Metal Renovator will reclaim from 65 to 75% new metal from your dross, thereby effecting a substantial saving and maintaining the quality of your metal.

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WORKS, CURTIS BAY, MD.

of the cylinders of the printing couple, and the folder having shafts perpendicular to the folder driving shaft for operating it but in the same horizontal plane of a longitudinal main shaft extending along the system perpendicular to all of the driving shafts and in the same horizontal plane, and means connected with the main shaft for driving all the parallel shafts directly.

1,883,257. INK SUPPLYING REGULATOR. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed October 28, 1926, Serial No. 144,878. Renewed May 9, 1932. 9 Claims. (Cl. 101—350.)

In an inking mechanism, the combination of the ink forwarding cylinders thereof, with means for supplying heat to one of the cylinders to soften the ink film thereon and means for automatically regulating the degree of such heat.

1,883,259. IMPALING PIN. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Original application filed Sept. 27, 1928, Serial No. 308,687. Divided and this application filed July 3, 1931. Serial No. 548,648. 2 Claims. (Cl. 270—47.)

1. The combination with a folding cylinder, of pivoted bars carried thereby, impaling pins mounted to reciprocate in the bars, and means in fixed position for swinging the bars backwardly when the paper on the cylinder is being folded.

1,883,572. INKING DEVICE FOR PRINTING MACHINES. Paul J. Clark, Longport, N. J. Filed May 9, 1930. Serial No. 450,921. 12 Claims. (Cl. 101—350.)

1. In a device of the character indicated, a type carrier roll, a reservoir for ink, a pump adapted to discharge ink from the reservoir, a stirrer adapted to stir the ink within the reservoir, operative connections between the roll and stirrer and pump, and means for transferring the ink discharged by the pump to the type on the roll.

1,883,638. MULTICOLOR INTAGLIO PRINTING MACHINE. Arnold August Egli, Hamburg, Germany. Filed Sept. 22, 1928, Serial No. 307,730, and in Germany Sept. 26, 1927. 5 Claims. (Cl. 101—152.)

1. In a multi-color sheet intaglio printing machine, the combination of an impression cylinder having more than two printing surfaces thereon, more than two printing cylinders whose axes lie upon an imaginary cylinder concentric with the axis of the impression cylinder, mechanism operative upon at least two, but less than all, of the printing cylinders to move the same simultaneously against different printing surfaces while the other printing cylinder or cylinders are in non-printing position, and means for moving the other printing cylinder or cylinders into printing position while the first-mentioned printing cylinders are in non-printing position, so that no printing is being performed as a simultaneously controlled group of cylinders or a single cylinder is moved into printing position against the impression cylinder.

1,883,689. TYPE CASTING MATRIX. Louis H. Gilbert, Hartford, Conn. Filed Sept. 22, 1930. Serial No. 483,487. 1 Claim. (Cl. 199—63.)

In a matrix for hand assembly, a matrix body with laterally extending positioning lugs adjacent the top only of the body, the central portion of the front face of the body being recessed to form a finger grip.

1,883,795. AUTOMATIC DRYING DEVICE FOR INKED SHEETS. Henry M. Kannee, New York, N. Y. Filed June 5, 1930. Serial No. 459,316. 7 Claims. (Cl. 198—213.)

7. In drying devices for inked paper sheets, means for feeding sheets of paper edgewise and in succession, a plurality of opposed sets of vertically disposed, helically spiral plate-like supports for gravitational feed of the sheets and means for rotating the supports in synchronism with the edgewise sheet feeding mechanism so that the sheets will successively fall into position upon the sets of helically spiral supports when the topmost area of each support lies under a margin of a sheet the means rotating the supports of each set in opposite directions.

1,883,224. FOLDING AND DELIVERY MECHANISM. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Original application filed May 26, 1926, Serial No. 111,787. Divided and this application filed Apr. 6, 1929. Serial No. 353,196. Renewed Apr. 7, 1932. 23 Claims. (Cl. 270—65.)

1. In a folder, the combination with a drag roll for introducing one or more webs into the folder, of a former located in a position for receiving the webs from the drag roll, means for supporting the former comprising a pair of brackets, a shaft extending across under the former, between but not in contact with, the brackets, a support at each end of the shaft, means carried by the supports for supporting the former, and means for adjusting the position of the shaft and the former.

Printing Oil Inks With Rubber Plates

By W. S. FOWLER*

THOSE interested in the printing of rubber plates with oil inks will be pleased with the suggestions given below. There is a certain technique, which, if followed, will produce successful results.

1. Make sure the plates are made of oil proof rubber.

2. Use special rubber plate inks or their equivalent to obtain the longest wear from the plates. (Ink should have a neutral and not an acid reaction.)

3. Use hand engraved rubber for all parts of the design except small type and intricate details.

4. Use molded or vulcanized rubber for small type work and all details that cannot be cut by hand. (Metal photo-engraved plates will print type and fine detail on most papers as well as rubber, and rubber molds need not be made from them except when the paper surface is exceptionally rough.)

5. Make ready with as light an impression as is possible.

6. Avoid signs of squeeze on printed edges.

7. Run ink as heavy and with as flooded a feed as a good distribution will permit. (When needed, rubber will print an ink film heavier than is possible from metal.)

8. Use thinning reducers sparingly, only as needed, and only those that have a neutral reaction.

9. Clean plates with high volatile cleaners, sold as rubber plate cleaners. (Do not use kerosene or similar low volatile oils, as these soften and injure the rubber.)

10. Make sure the mounted plate is no higher than standard printing requirements demand. (Should the form rollers of the press be allowed to hit the rubber plates harder than required for good inking, the unnecessary friction will develop additional heat sufficient to cause the rubber to swell and become soft through increased oil absorption.)

*Hampden Glazed Paper and Card Co., Holyoke, Mass. Reprinted from the *Printing Ink Maker* by permission.

Opens Cleveland Branch

Officials of the Linotype Supply Co., 321 Broadway, New York, N. Y., have opened a branch office at 1456 East 17th St., Cleveland, Ohio. Herman Hiatt, who until recently was employed by the Consolidated Press, is the branch manager.

Catalogs, Books and Bulletins

Readers of PRINTING EQUIPMENT ENGINEER who are interested in securing any of the catalogs, books or bulletins listed below can do so by checking the literature desired. Mark carefully only that literature which you wish to receive. Fill out the coupon and send it to us. The literature will be forwarded without cost except where noted.

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Bulletin—On small mat moulding press for the making of stereotypes to avoid keeping forms tied up and to release heavy expense in standing metal.

Miller Marches On—Folder illustrating, describing and giving specifications of a new two-color press.

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